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THE

# South African MINING JOURNAL

Physical & Applied Sci. Serials

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The South African Mines, Commerce & Industries "

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[WEEKLY, PRICE 6D.]

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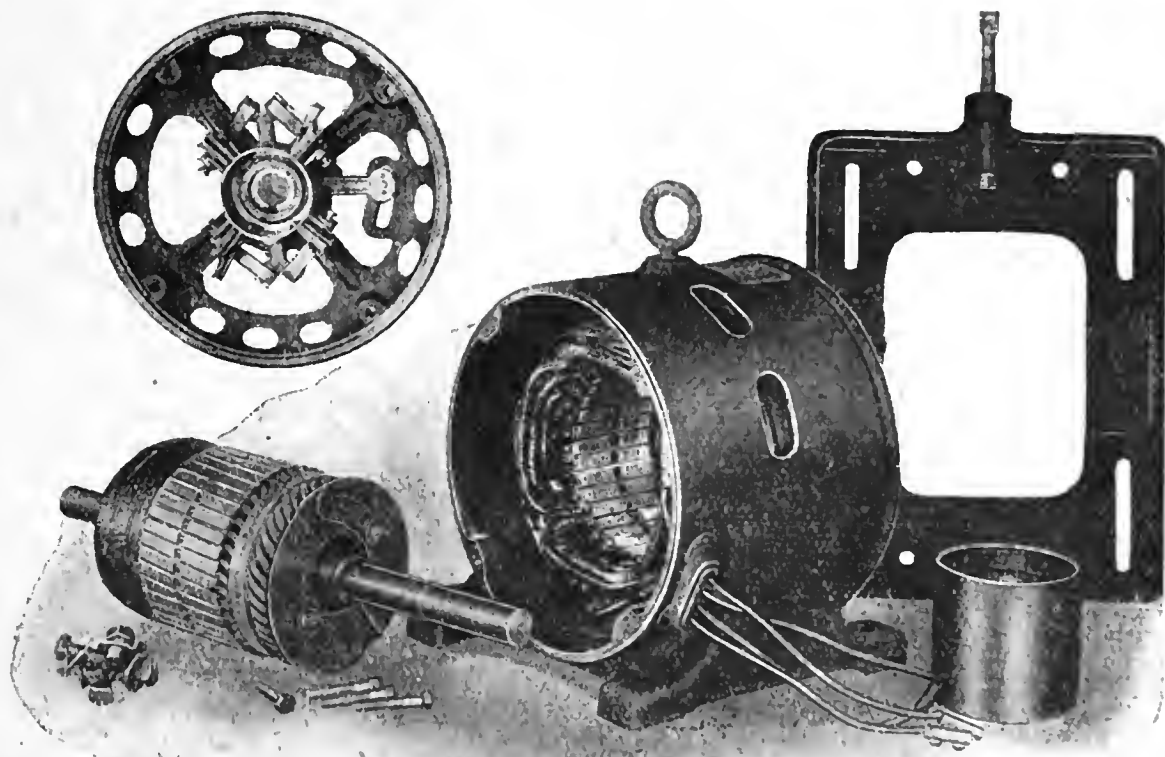
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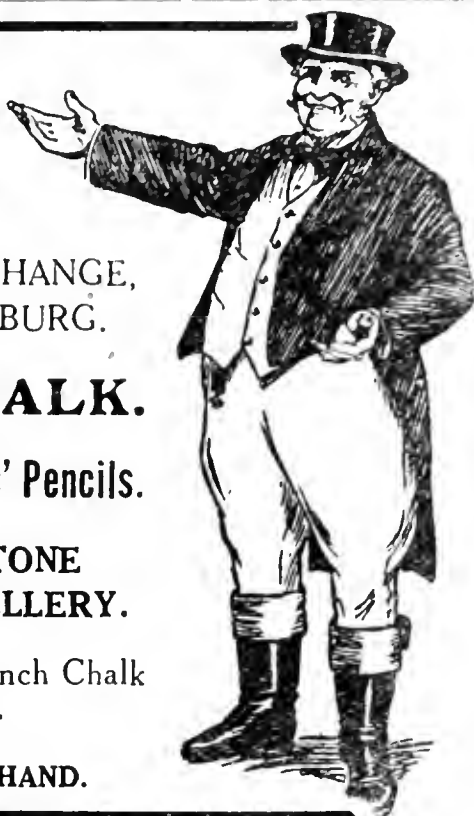
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# The Simmer & Jack Proprietary Mines, LIMITED.

(Incorporated in the Transvaal).

## REPORT OF THE DIRECTORS

For the Year ended 30th June, 1917.

Submitted at the Nineteenth Ordinary General Meeting of Shareholders, held in the Board Room, Consolidated Gold Fields Buildings, Simmonds Street, Johannesburg, on Friday, 28th September, 1917, at 2.30 o'clock in the afternoon.

Gentlemen,—Your Directors beg to submit their Report, together with the audited Accounts, for the year ended 30th June, 1917.

### CAPITAL.

The Capital of the Company, which is unchanged, consists of £3,000,000, in 3,000,000 shares of £1 each, all of which have been issued fully paid.

### PROPERTY.

The area of your Mining Property, which is the same as last year, is equal to a Claim area of 624.270 claims, of which 425.086 claims are held under claim licences and 199.184 under mynpacht title, situated on the farm Elandsfontein No. 11.

Of the claims held under mynpacht title, the New Primrose Gold Mining Company, Limited, have the lease of 3.428 claims for mining purposes and the surface rights of 11.599 claims. Of the total number of claims 246.07, however, lie to the north of the reef.

During the year an agreement was made with the Simmer Deep, Limited, in terms of the circular issued to shareholders on the 31st January, 1917, whereby your Company obtained from the Simmer Deep, Limited, the right to mine an area equivalent to approximately 40.6 claims, situated on the north-western boundary of that Company's property, as consideration for which your Company has agreed to pay to the Simmer Deep, Limited, the sum of £124,000, of which £62,000 was paid on the signing of the agreement, and the balance is payable in five equal annual instalments, with interest at the rate of 5 per cent. per annum. Your Company may, how-

ever, at its option, pay off the balance or any portion thereof before the expiration of five years.

It is estimated by the Consulting Engineer that the claim area intact at 30th June, 1917, including that contained in the 40.6 claims, in which the right to mine has been acquired from the Simmer Deep, was equal to 123.677 claims, of which 29.517 claims are in dyke, leaving an intact reef-bearing area equal to 94.16 claims, in addition to which a large tonnage of ore is available as reclamation from areas already stoped out.

Your Company also own seven machine stands (five of which are leased to the Victoria Falls and Transvaal Power Company, Limited), four diggers' stands, all of which are under lease, and seven water-rights, six of which are situated on the farms Elandsfontein No. 11, and one on the farm Driefontein No. 1.

In addition to the above, your Company holds the right under a lease from the Rand Mines, Limited, to the water-right on Elandsfontein No. 6, forming a portion of the Victoria Lake.

The area of your Company's freehold title, which consists of a portion of the Farm Elandsfontein No. 11, comprises 1,264 morgen 231 square roods 25 square feet. Of this area, a portion, 142 morgen 468 square roods 11 square feet in extent, has been laid out into the following Townships: Germiston and North Germiston (which are owned in their entirety by the Company), East Germiston, West Germiston, Germiston Extension, and a portion of South Germiston (in which Townships the Company holds a two-thirds interest) and the Company's portion of the Primrose Township, leaving the area of the Company's freehold (exclusive of the freehold area undisposed of in the Townships, which is shown below) at 30th June, 1917, at 1,121 morgen 363 square roods 14 square feet.

# The Simmer & Jack Proprietary Mines, Limited—continued.

The freehold ground in the above Townships still available for disposal at 30th June, 1917, was equal to an area of 49 morgen 17 square roods 3 square feet, arrived at as follows:—

	Morgen.	Sq. roods.	Sq. feet.
Total area .....	142	468	11
Less: Area covered by streets, lanes, open spaces, parks and railway appropriations .....	53	266	23
	89	201	132
Less: Area of freehold lots disposed of .....	40	184	129
Leaving an area at June 30, 1917, of	49	17	3

During the year a further portion of the Company's freehold, in extent 28 morgen 283 square roods, was converted into the Township of South Germiston (Extension), consisting of 66 Industrial Sites (in which your Company holds a three-fourths interest). The whole of this area is being transferred to the Municipal Council of Germiston.

The number of stands unsold in the Townships at 30th June, 1917, was as follows: Germiston Township, 130; North Germiston Township, 34; East Germiston Township, 8; West Germiston Township, 6; Germiston Extension Township, 5; South Germiston Township, 47; and Primrose Township, 39.

The Property Account in the Balance Sheet has been subdivided to show under the heading of Interests in Townships the estimated value of your Company's interest in the unsold freehold of the above stands.

A separate heading, "Buildings in Townships," shows the book value of buildings in these Townships belonging to your Company (viz., 26 cottages, the Germiston Estate House and Offices, and the buildings on Stands 161/2/3, Germiston Township), leaving under the remaining heading "Mynpacht and Claim Areas, Water-rights, and Freehold," the book value attaching to your Company's mining titles and of its freehold ownership other than in the Townships mentioned.

## OPERATIONS.

The Consulting Engineer's and Manager's Reports, which are attached, give a resumé of the operations conducted at the Mine during the period under review.

## ACCOUNTS.

The Working Profit for the year, after allowing for expenditure of £3,998 14s. 4d. on renewals and replacements of Machinery, Plant, etc., amounted to	£227,186	19	7
Add: Sundry Revenue .....	24,789	17	5
Making a gross total of .....	251,976	17	0
Deduct: Contributions to Miners' Phthisis Compensation Fund, estimated Normal and Dividend Taxes, Expenditure due to the War, Sundry amounts written off, and Income Tax, London .....	44,464	19	10
Leaving a net profit carried to Appropriation Account of .....	207,511	17	2
Add: Balance at credit of Appropriation Account at 30th June, 1916 .....	92,233	11	8
	£299,745	8	10

From this amount there was appropriated	
For Dividends Nos. 29 and 30, each of 3½ per cent., declared during the year	£225,000
For Reserve for Machinery, Additions and Renewals	5,625
	230,625
Less: Expended on Renewals and Replacements and charged to Working Costs	3,998 14
	226,626 5 4
Leaving a balance to Appropriation Account at 30th June, 1917, of	£75,119 3 2

## CAPITAL EXPENDITURE.

The amount expended on equipment of property during the year including shaft sinking, and after deducting transfers, sales and expenditure on renewals and replacements, was £3,774 3s. 3d.

## INVESTMENTS.

Your investments and interests in other concerns now stand in the books at £12,428 7s.

During the year 40,405 Victoria Falls and Transvaal Power Company, Limited, 6 per cent. Preference Shares and 8,500 Ordinary Shares of that Company have been sold, and certain necessary adjustments have taken place in your Company's interests in the Rand Mutual Assurance Company, Limited, and the Native Recruiting Corporation, Limited.

A list of investments is shown in the Balance Sheet.

## DIRECTORATE.

You will be asked to elect two Directors in the places of Mr D. Christopherson and Lieut.-Col. F. Leslie Brown, D.S.O., who retire by rotation, but are eligible and offer themselves for re election.

## AUDITORS.

It will be necessary to fix the remuneration for the past year's audit and to elect two Auditors in the places of Messrs. Douglas, Low & Co., and Mr. T. A. White, who retire in accordance with the provisions of the Articles of Association, but are eligible and offer themselves for re election.

## GENERAL.

During the year Mr. O. P. Powell was appointed Superintending Engineer and Mr. C. H. Greathead was appointed Acting Manager. Your Directors desire to record their appreciation of the services rendered by these gentlemen during the year.

D. CHRISTOPHERSON (Chairman).

C. H. BARCLAY, Directors.

The Consolidated Gold Fields of S.A., Ltd., Secretaries.

Per A. C. GRANT.

Johannesburg, 20th September, 1917



## The Simmer &amp; Jack Proprietary Mines, Limited—continued.

Dr.	BALANCE SHEET AT 30th JUNE, 1917.	Cr.	
To Capital Account .....	£3,000,000 0 0	By Property Account (at cost, less sundry credits).....	£2,659,806 14 3
3,000,000 shares of £1 each, all of which are issued.		Mynpachts, Claim Areas, Water rights and Freehold .....	£2,487,948 18 3
.. Reserve Account .....	632,937 5 5	Less—Net realisation of Freehold, South Germiston Extension, sold to Germiston Municipality for Industrial Site .....	3,300 0 0
Balance at 30th June, 1916.			2,484,648 18 3
.. Amounts appropriated for Capital Expenditure .....	390,536 0 8	Add — Purchase price payable to the Simmer Deep, Limited, for right to mine approximately 40 claims in their property, plus Transfer Duty ..	125,550 0 0
Balance at 30th June, 1916 .....	£339,691 12 2		£2,610,198 18 3
Add—Additional Capital Expenditure during the year transferred from Additions and Renewals Fund .....	50,844 8 6	Estimated value of the Company's interests in the following Townships: Germiston, West Germiston, North Germiston, East Germiston, South Germiston, Germiston Extension and Primrose .....	45,146 6 1
		Less — Net realisation of sale of Stands during the year... ..	674 9 0
.. Fund for Additions to and Renewals of Machinery and Plant		Buildings on Townships	11,135 18 11
Balance at 30th June, 1916 .....	£59,029 2 2	Less—Redemption Account transferred .....	6,000 0 0
Add—Further appropriation .....	5,625 0 0		5,135 18 11
	64,654 2 2	.. Expenditure to date on equipment of Property—less amounts written off ..	1,413,697 2 2
Less—Charged to Working Expenditure and Revenue Account .....	3,998 14 4	Shaft sinking .....	248,203 3 5
Less — Amounts written off for Additions during the year .....	50,844 8 6	Buildings .....	162,042 19 0
	54,843 2 10	Machinery and Plant .....	907,561 16 0
.. Reserve Gold .....	16,666 13 4	Water Service .....	79,466 10 1
.. Sundry Creditors .....	250,091 8 8	Simmer and Jack Hospital (Buildings and Furniture) .....	13,786 3 0
Open Accounts for Wages, Stores and Sundries .....	48,827 9 7	Swimming Bath .....	1,160 10 5
Simmer Deep, Ltd., for balance payable on Mining Rights acquired, including interest to date .....	63,308 13 1	Simmer Railway Siding .....	1,086 9 0
Sundry Shareholders' Dividend No. 30 of 3 $\frac{3}{4}$ per cent. ....	112,500 0 0	Metallurgical Laboratory .....	80 0 0
Government of the Union of South Africa—Provision for Normal and Dividend Tax .....	25,455 6 0	Simmer and Jack Mess Equipment... ..	309 11 3
.. Dividends Unclaimed, <i>per contra</i> ..	35,459 10 8	.. Livestock, Vehicles and Harness .....	213 17 0
.. Balance from Appropriation Account ..	73,119 3 2	.. Motor Cars and Lorry .....	228 18 0
Contingent Liabilities—		.. Office and other Furniture .....	801 5 0
Balance payable on uncompleted Contracts .....	£6,546 5 1	.. Stores and Materials on hand, including Machinery not erected .....	88,488 16 10
Amounts uncalled on shares held—		.. Payments in advance .....	13,312 19 2
12s. per share on 2,034 Witwatersrand Co-operative Smelting Works, Ltd., shares .....	1,220 8 0	Native Labour Recruiting Expenses... ..	2,494 6 7
8s. per share on 862 Witwatersrand Native Labour Association, Ltd., shares .....	344 16 0	Cyanide, Zinc and Mercury Deposits, Claim Licences and Sundries.....	10,818 12 7
£4 per share on 246 Rand Mutual Assurance Co., Ltd., shares .....	984 0 0	.. Investments and Interests in other concerns (at or under cost) .....	12,428 7 0
Native Recruiting Corporation, Ltd., Deposit Account—15s. per native uncalled on complement of 4,730 natives .....	3,547 10 0	40,516 4/16 Simmer Deep, Ltd., shares of £1 each, fully paid .....	
	£12,642 19 1	2,034 Witwatersrand Co-operative Smelting Works, Ltd., shares of £1 each, 8s. paid .....	
		862 Witwatersrand Native Labour Association, Ltd., shares of £1 each, 12s. paid .....	
		246 Rand Mutual Assurance Company, Ltd., shares of £10 each, £6 per share paid .....	11,245 17 0
		8,950 Breyten Collieries, Ltd., shares of £1 each, fully paid .....	
		4 Victoria Falls and Transvaal Power Co., Ltd., Preference shares of £1 each, fully paid .....	
		46 Native Recruiting Corporation, Ltd., shares of £1 each, fully paid... ..	
		Native Recruiting Corporation, Ltd.—deposit of 5s. each on the total complement of 4,730 natives, being part of total liability, under agreement, of £1 per native .....	1,182 10 0
		.. Sundry Debtors .....	13,782 7 8
		.. Gold in transit .....	36,160 2 2
		.. Cash at Bankers, London and Johannesburg .....	35,459 10 8
		For Dividends unclaimed, <i>per contra</i> ..	
		.. Cash .....	134,181 1 4
		On fixed deposit, and at Bankers, London, Johannesburg, Germiston and on hand at mine.	
	£4,408,621 1 3		£4,408,621 1 3



## The Simmer &amp; Jack Proprietary Mines, Limited—continued.

## Dr. Working Expenditure and Revenue Account for the Year ended 30th June, 1917. Cr.

To Mining Expenses ...	£392,593 19 9	By Gold Account	£819,078 17 4
Mining & Pumping ...	£366,836 9 0		
Development ...	25,757 10 9		
„ Reduction Expenses	144,246 14 0		
Sorting, Crushing and			
Transport of Ore ...	16,861 16 3		
Milling Expenses ...	38,522 18 11		
Tube Milling Expenses	24,762 4 4		
Sand Expenses ...	34,173 15 1		
Slime Expenses ...	29,925 19 5		
„ General Expenses—Mine ...	39,183 1 2		
„ Expenditure on Renewals and Re-			
placements of Machinery, Plant,			
Buildings, etc. ...	3,998 14 4		
„ Head, London, and Paris Offices			
Expenses ...	11,869 8 6		
	£591,891 17 9		
„ Balance, being Profit on Working			
carried down ...	227,186 19 7		
	£819,078 17 4		£819,078 17 4
To Miners' Phthisis Compensation		By Balance brought down	£227,186 19 7
Fund ...	£5,975 0 5	„ Elandsfontein Revenue ...	£10,717 7 2
Levies under Miners' Phthisis Act		„ Interest, Commission and Exchange	3,500 13 11
for year ended June 30, 1917.		„ Sale of Water ...	7,351 11 4
„ Sundry amounts written off ...	271 11 8	„ Dividends on Investments ...	57 7 0
„ Expenditure due to war ...	11,421 10 8	„ Transfer Fees ...	96 18 6
„ Income Tax, London ...	559 10 2	„ Sundry Revenue ...	3,065 19 6
„ Government of the Union of South			24,789 17 5
Africa ...	26,237 6 11		
Provision for the year			
ended June 30, 1917,			
for Normal and Divid-			
end Tax ...	25,455 6 0		
Add — Taxes under-			
estimated for the year			
ended June 30, 1916	782 0 11		
	£44,464 19 10		
„ Balance carried to Appropriation			
Account ...	207,511 17 2		
	£251,976 17 0		£251,976 17 0

Dr.

## Appropriation Account.

Cr.

To Dividends ...	£225,000 0 0	By Balance at 30th June, 1916 ...	£92,233 11 8
Dividend No. 29 of 3½ per cent.,		„ Balance brought from Working Ex-	
declared 18th December, 1916 ...	£112,500 0 0	penditure and Revenue Account for	
Dividend No. 30 of 3½ per cent.,		year ended 30th June, 1917 ...	207,511 17 2
declared 28th June, 1917 ...	112,500 0 0		£299,745 8 10
„ Reserve for Additions to and Re-			
newals of Machinery and Plant	1,626 5 8		
Further provision as voted—amount			
equal to 2½ per cent. of Divid-			
ends Nos. 29 and 30 ...	5,625 0 0		
Less—Amount expended on Re-			
newals and Replacements and			
charged to Working Expenditure			
and Revenue Account ...	3,998 14 4		
„ Balance carried to Balance Sheet	73,119 3 2		
	£299,745 8 10		£299,745 8 10

THE CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA, LIMITED.  
Secretaries

per A. C. GRANT.

D. CHRISTOPHERSON  
(Chairman).C. H. BARCLAY,  
Directors.

To the Shareholders of

The Simmer and Jack Proprietary Mines, Limited.

We report that we have examined the above Balance Sheet with the Books and Vouchers of the Company in Johannesburg for the year ended 30th June, 1917, in which have been incorporated the audited Accounts received from London, and have obtained all the information and explanations we have required as Auditors. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us, and as shown by the books of the Company.

T. A. WHITE  
DOUGLAS, LOW & CO.  
(Incorporated Accountants).  
Auditors.

Johannesburg, 20th September, 1917.

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## Notes and News.

The Rand Mines, Ltd., write under date October 11:—We beg to advise you that the following article **The City Deep Position.** has been despatched to this company's London office:—In response to enquiries from shareholders, publish the following: Shortage of native labour alone prevents full supply of ore to reduction plant, capacity of which 80,000 tons monthly. During the past five months underground force shows a decrease of 600, whilst mine is now 1,700 short of its underground native complement. There is no marked change in development position of lower levels since the annual meeting of company."

\* \* \* \*

An increase of £5,328,581 in the output of diamonds as compared with the previous year, the **The Diamond Industry in 1916.** respective totals being £399,810 and £5,728,391, is a feature of the report of the Government Mining Engineer for 1916,

just issued. Washing operations had been resumed on the principal mines early in the year, followed in some cases by the recommencement of actual mining. With regard to De Beers Company, the Bultfontein and Wesselson mines started washing on a very restricted scale in the beginning of January, 1916. Subsequently, the demand was found to justify a gradual increase of production, culminating in the resumption of underground work, hauling from the mines named being restarted towards the end of May. On May 24th, 1916, washing was extended to the Dutoitspan floors, but underground work there had not been resumed at the date of the report, nor was there any development work on any of the mines during the year reviewed, owing chiefly, the report states, to scarcity of miners and skilled labour. The report records a great deficiency of skilled white labour, especially miners and mechanics, during the year (owing presumably to the great drain on personnel occasioned by the war). The supply of native labour, as usual on the diamond fields, proved ample for all requirements.

\* \* \* \*

The total output of diamonds from the diamond mines for the year 1916 was 1,403,514 carats. **The Diamond Mines and Market Prices.** valued at £3,393,311. This total is exclusive of the results of debris washing, which accounted for 8,362 carats, representing a value of £10,341. The average value of the diamonds produced by the mines during the year was £2 8s. 4d. per carat. Taking, however (the report adds), the average price realised per carat for the first quarter of the year against that realised in the last, we find an increase from £1 18s. 10d. to £2 14s. 9d., equivalent to a rise of 41 per cent. That the average price per carat of both mine and alluvial stones in 1916 was, as the Mining Engineer points out in emphasising the year's chief characteristics, the highest since Union, is a striking fact, bearing conclusive testimony to the practical success of the sound policy of control exercised during the disturbing influences of the war. With regard to the alluvial diggings, the report of the Cape inspector shows that the output for 1916 was 98,879.75 carats, of a total declared value of £654,276. The great increase on 1915 is apparent when it is stated that the previous year's production was 61,933.25 carats, representing an aggregate value of £259,212. The average price realised per carat for the alluvial product for the year 1916 was 132s. 4d., as against 83s. 8d. for 1915. The 1916 average, it is pointed out, transcends all records—in recent years at least—the highest previous figure having been 120s. 6d. in 1912. Taking the last quarter of 1916 by itself, the average price realised was no less than 140s. In view of the above figures, the report continues, it need scarcely be remarked that the year has been one of extraordinary prosperity on the diggings generally.



Turning to the report of the Orange Free State Inspectorate for 1916, the Jagersfontein and Koffyfontein mines are shown to have also resumed production in January, 1916, but only on a strictly limited scale, operations being confined to washing "blue" from stock on the floors, without any breaking of fresh ground. Blaauwbosch started full operations in March, and New Eland in April, while towards the end of the year the Monteleo joined the group of producers, in which connection it is added: "The last is a new proposition, not yet proclaimed, apparently of small size, but giving promise of satisfactory results otherwise." For the last month of 1916 there was an average of 364 whites and 2,267 natives employed on the diamond mines of the O.F.S., as compared with 1,175 whites and 10,379 natives in the December preceding the outbreak of the war. These figures are cited as indicating how little the industry had progressed towards normal conditions, so far as the Free State is concerned, during the year under review. It is further pointed out that the mere resumption of washing, on so limited a scale, on the chief mines, could not have been expected to have much ameliorative effect upon surrounding conditions.

\* \* \* \*

According to the report of the Union Observatory last year 429 earthquake shocks were registered by seismograph at the Observatory. There were 32 underground disturbances reported by mines in the district, and of these 16 were accompanied by shocks felt on individual mines. In only four cases out of 32 did accidents result. In three cases one native in each was injured, and in one case—viz., at the Ferreira Deep, when two stopes partially subsided—two natives were killed and two whites and seven natives injured. The intensity of the shocks was not so great in 1916 as in 1915.

\* \* \* \*

Mr. F. W. Jenkins, in a paper read recently before the North of England Institute of M. and M.E., said that Port Nolloth is situated about 300 miles from Capetown on the West Coast of Africa, and is really the entrance to Little Namaqualand. It is the only port on the coast. There is a railway, 120 miles long, which runs east and south-east. For this enterprise credit is due to the Cape Copper Company, Ltd., one of the early pioneers. Namaqualand would never have been heard of had it not been for a few pioneers who were prospecting for minerals, and whose operations were not attended with much success for many years. Eventually, two of the richest mines for copper were discovered, including the O'Okiep, which in the ten years from 1883 to 1904 produced 534,626 tons of copper ore containing an average of 20.2 per cent copper. Spectakel in the same ten years brought to the surface 19,636 tons of very high-class ore, yielding an average of 31.85 per cent. copper; Nababeep 114,332 tons, with an average percentage of 6.16 copper; and O'Okiep East 19,022 tons, giving an average yield of 5 per cent. copper. The Namaqua Copper Company, Ltd., also proved the value of Namaqualand as a copper producing district, for in Tweefontein 138,683 tons containing 25.4 per cent. copper was produced in the same ten years. Some of these properties are not now producing as much ore as formerly, and outside them little or no work in the way of prospecting in the large tract known as Little Namaqualand has been accomplished. Mr. Jenkins, however, said he believed Namaqualand, with the assistance which is now forthcoming from the South African Government, will prove to be one of the largest and most successful copper fields in the British Empire, and that this should be a matter of great interest to the smelters in the North of England, as the ore can now be shipped direct from Port Nolloth to Newcastle-upon-Tyne and Swansea, the high grade making it possible to pay for transport to the smelters in England, whilst at the same time yielding a very handsome profit to the miners.

It will be remembered that the following two resolutions were adopted by the Johannesburg Chamber of Commerce recently, and were forwarded on the 18th August to the Government for the serious consideration of the Minister of Mines and Industries, viz.:—"That the moment is urgent for this Chamber to approach the Minister of Mines with the request that in all future mining leases the Government may grant, a clause should be inserted requiring that all the equipment necessary and essential for the development and future operations of the mine shall be of the British Empire's or Allied Countries' manufacture." "That the Minister of Mines be requested to grant no mining leases in terms of the Gold Law to any person, group, firm or company, who has undertaken any obligation to purchase the equipment necessary for the development and future operation of the mine from any particular manufacturer or group of manufacturers, or from any particular country; and, further, that any person, group, firm or company obtaining such a lease shall bind itself not to undertake any such obligation during the continuance of the lease." The Committee of the Chamber expressed the opinion that apart from the position of affairs in regard to trade at the end of the present war, the recommendations contained in these resolutions should receive attention at the present time; "because," as the monthly report of the Committee states, "if leases are granted to anyone who does not comply with the recommendations made therein, the cessation of the war will have no effect upon the privileges which may be given to lessees at the present time and until the war ends. In that event it will not be possible to rectify undesirable conditions which may have been granted, or any omissions from the terms of such leases." The Secretary for Mines and Industries has replied that the resolutions are receiving consideration.

\* \* \* \*

The report of the Executive Committee of the Rhodesia Chamber of Mines for the month of August gives the following summary of the returns of native labourers employed on Southern Rhodesian mines during the months of June and July:—Local: June, 15,792; July, 15,419. Portuguese territory: June, 7,129; July, 6,997. Northern Rhodesia: June, 7,651; July, 7,880. Nyasaland: June, 9,369; July, 9,369. Other sources: June, 1,155; July, 1,190. Totals: June, 41,096; July, 40,855. The number employed in July shows a decrease of 505 as compared with the corresponding month in 1916. Advice has been received from the Administration, the report proceeds, that the enquiry into railway matters, which was postponed in February last, will take place in the beginning of February, 1918. With regard to the importation of mining stores from Johannesburg, an arrangement has been made with the Transvaal Chamber of Mines whereby orders from Rhodesian merchants or mines can be franked by the Rhodesia Chamber on application. The attention of members is called to Government Notice No. 343, which appeared in the *Government Gazette* of August 31, reserving all timber for a distance of 50 feet on either side of all public streams in Southern Rhodesia against cutting for mining purposes. The object of this reservation is the protection of the water supplies of the country, and is one of vital importance to the mining industry. The special rates allowed by the railways on the transport of second-hand machinery from Rhodesia to the south will be cancelled as from October 1. As the value of silver has very materially increased of late, representations have been made to the banks in Rhodesia with the object of obtaining a better price for producers. The current market rate to-day in London is 4s. 2d. per fine ounce. Mr. D. V. Burnett has tendered his resignation as the representative of Mr. R. R. Hollins, Mr. C. S. Dyer has been elected a member of the Executive Committee vice Mr. D. V. Burnett resigned. Other matters of interest dealt with by the Executive Committee during the past month were as under: (1) High grade explosives; (2) war pay and allowances to employees on active service; (3) coal supplies.



## TOPICS OF THE WEEK.

### A YEAR OF SOUTH AFRICAN MINING.

THE report of the Government Mining Engineer for 1916, issued this week, is as usual a mine of information on the mineral activities of the Union. Several extracts from the report appear in this issue, and it must suffice here to summarise the salient features and figures indicated by Mr. Kotzé in the opening chapters of the blue book. The total mineral output of the Union has increased in value by £7,062,350, that is, from £43,531,009 to £50,593,359. The chief increases are as under: Diamonds, £5,328,581; gold, £851,895; coal, £597,186; copper, £95,066; asbestos, £47,171; salt, £24,214; antimony, £13,187. Mr. Kotzé shows that resumption of washing operations early in 1916 on the principal diamond mines and the subsequent restarting of mining operations on some of these mines was responsible for a large increase in the output of diamonds; the number of carats produced on alluvial diggings also showed a very substantial increase, while the average price per carat of both mine and alluvial stones in 1916 was the highest since Union. The gold output for 1916 is the highest since Union, the increased output as compared with 1915 being chiefly accounted for by larger outputs from the mines in the Boksburg district of the Witwatersrand. As regards coal, all Provinces, except the Cape, show increases, both in tonnage sold and price per ton obtained. In the Cape Province the sales have decreased though the price has increased a little over 2d. per ton. The increase in the value of the copper output is due chiefly to a rise in price. There was, however, an increase of about 10 per cent. in the percentage of pure metal shipped from the Transvaal. The increase in the value of asbestos is due to the advent of a number of new producers, chiefly in the Cape Province, and to an increase in price per ton. Taken in conjunction with salaries and wages, the figures indicate a payment for stores, wages, and salaries of about £31,500,000, of which the great bulk is paid out in the Union. A further decrease in the accident death-rate is recorded, and this is dealt with more fully in the extracts printed elsewhere. Mr. Kotzé draws attention to the fact that, although it is not possible to complete and publish his report early in the year, the most important information contained in it regarding output, labour, stores, and wages for the whole year is furnished in tables attached to the Department's monthly statistics for February and March, and is thus readily available to the public early in the year. These tables contain more detailed information than is found in the special preliminary annual reports of mining statistics published by many other countries. The output of gold represents 41.0 per cent. of the world's production for 1916, estimated at £96,415,000, as compared with 39.5 per cent. for 1915. The total production of gold from the Union of South Africa since 1868, when gold was first discovered, amounts to approximately £514,963,000 up to the end of 1916, and was practically all won in the Transvaal. A total of 9,765 stamps and 326 tube mills was at work during December, 1916, as compared with 10,076 and 329 respectively during December, 1915. In regard to salaries and wages, £17,505,661 were expended by mines and allied concerns within the Union for the year 1916. The expenditure for 1915 was £15,879,675. Of this amount the gold mining industry accounts for £14,374,810, or 82.1 per cent., against £13,655,375 for 1915; the diamond mining industry accounts for £1,006,239, or 5.8 per cent., against £352,336 for 1915; the coal mining industry accounts for £1,169,586, or 6.7 per cent., against £1,001,315 for 1915; the base mineral mining industry accounts for £462,905, or 2.6 per cent., against £398,071 for 1915; miscellaneous, £492,121, or 2.8 per cent., against £472,580 for 1915. In June, 1916, there were on the Witwatersrand gold mines approximately 10,597 miners and underground labourers receiving an average pay of 21s. 1d. per shift, and 7,979 surface men getting 17s. 4d. per shift, compared with 10,416 at 20s. 9d. and 8,106 at 16s. 11d. respectively for June, 1915. The average pay per shift for the combined

labour was 19s. 5d. for June, 1916, and 19s. 1d. for June, 1915. During the year under review machinery and stores of the value of £13,995,258 were consumed by the mining industry, an increase of £1,912,887 on 1915. Of this amount the gold mining industry accounts for £12,320,592, or 88.0 per cent., against £10,935,383 for 1915, the diamond mining industry accounts for £360,485, or 2.6 per cent., against £139,521 for 1915; the coal mining industry accounts for £798,611, or 5.7 per cent., against £617,819 for 1915, the base mineral industry accounts for £515,659, or 3.7 per cent., against £389,648 for 1915. Although larger quantities of various stores were consumed, notably by diamond mines on account of resumption of work, the increase in total value may be attributed to a large extent to the higher prices ruling in 1916. An amount of about £7,000,000, or more than half of the amount expended by mines on stores and machinery, is estimated to represent expenditure on South African products. Many other illuminating facts are brought out in Mr. Kotzé's report, and to these we hope to return in our next issue.

### THE GOVERNMENT MINERS' TRAINING SCHOOLS.

By a coincidence the annual report of the Chairman of the Board of Control of the Government Miners' Training Schools was issued this week just as we were preparing an article on the whole subject of the schools. Through the courtesy of Mr. Malcolm Fergusson, the Chairman of the Board of Control, we were privileged to pay a visit during the week to the Bantjes School, and to have an object lesson in the methods followed there. The Bantjes School is more fortunate than that at Wolhuter in its surroundings, the apprentices being housed at the former in the solidly-built staff quarters of the Bantjes, under ideal conditions. Unfortunately, the future of the mine itself is far from assured, and it may be necessary, in the event of its closing down, to find transport for the students to another neighbouring property. Mr. Fergusson's report for 1916 provides an excellent summary and introduction to the subject; and we will content ourselves with reprinting it this week, leaving to a subsequent issue the publication of the further data we have collected. In view of the fact that the Chamber of Mines have now taken over the town office of the Schools from the Mines Department, the annual report in future will doubtless be issued separately, and earlier in the year. Meanwhile it is satisfactory to observe that the Government is keenly alive to the possibilities of the Schools; and that important organs of the Dutch section of the population, such as "Ons Land," are encouraged to make known the advantages of the Schools throughout the country districts. The Board of Control has left nothing undone to advertise the Schools among the rural population. Space was bought in practically all of the country newspapers; and the aid of the bioscope was enlisted in the smaller towns and villages for giving publicity to the scheme. It is not too much to say that the response up to the present has been disappointing, in view of all the benefits offered. This is partly due to the prejudice against work on the Rand gold mines—through exaggerated fear of miners' phthisis—that still lingers in the "outside" districts; and, to some extent due to the very rigorous medical test applied to applicants for admission by the phthisis experts of the Medical Research Bureau. It would, indeed, seem that in their zeal to keep out of the mines anyone with the faintest trace of predisposition to pulmonary trouble, the medical specialists in question ignore the peculiar circumstances that surround the physical conditions of the young aspirants of the Government Miners' Schools. Most of them come straight from the farm; they differ, physically, from the youth of European countries in point of rapidity of growth; and it is manifestly unfair to judge them according to European standards. It is possible that by applying more commonsense methods and a knowledge of the special local conditions to each individual case, the percentage of applicants passed as fit by their own doctors only to be rejected by the Medical Bureau experts, would be reduced with profit to both the applicants and the industry.

## POSITION AND PROSPECTS OF SWAZI TIN.

THE report for the year ended 30th June, 1917, of Mr. J. Jervis Garrard, Consulting Engineer to the Swaziland Tin Company, Ltd., is as follows:—The working profit for the year was £20,348 18s. 3d., as against £18,279 2s. 5d. for the previous year. A comparison of the year's results with those of the two previous years is as follows:—Cubic yards treated during year: 1916-17, 915,536; 1915-16, 915,282; 1914-15, 961,550. Cubic yards treated, average per month: 1916-17, 76,295; 1915-16, 76,273; 1914-15, 80,129. Lb. concentrate recovered per cubic yard: 1916-17, 1.008; 1915-16, 1.048; 1914-15, 1.004. Grade of concentrate per cent. metallic tin: 1916-17, 70.73; 1915-16, 70.5; 1914-15, 71.253. Lb. metallic tin per cubic yard: 1916-17, .713; 1915-16, .739; 1914-15, .715. Average value realised per cubic yard: 1916-17, 12.747d.; 1915-16, 11.519d.; 1914-15, 10.206d. Average cost per cubic yard: 1916-17, 7.413d.; 1915-16, 6.726d.; 1914-15, 6.597d. Average profit per cubic yard: 1916-17, 5.334d.; 1915-16, 4.793d.; 1914-15, 3.609d. Average metal price realised per ton: 1916-17, £193.785; 1915-16, £166.310; 1914-15, £158.763. (The costs given include all general charges and head office expenses.) The amount of ground treated during the year was slightly more than during the previous year, and although the recovery was slightly higher, the profit shows an increase of £2,070 over the previous year owing to the higher price realised for the metal. The effect of the drought experienced during the early part of the year is shown by the fact that the average amount of ground cut per month for the first five months was only 68,697 cubic yards as against 81,719 cubic yards per month for the last seven months. The higher cost per cubic yard was largely due to the increased cost of materials arising from war conditions. Power stations: The main Hydro-Electric plant ran well during the year, the running time being 97 per cent. of full time, generating 997,822 units at a cost of 0.206d. per unit. A new subsidiary power station, comprising a three-phase electric generator driven by Pelton wheel capable of generating 100 k.w. was completed and started up in the middle of June. The power from this station is carried two miles over the hills to Foy's Creek, where it runs a pressure nozzle pump similar to Gray's Creek pump described in my annual report for the year ended 30th June, 1913. The water used to generate this power is the tail water from the main power station carried four miles by water race to a point above the upper end of Stable Creek, where it is dropped in a pipe line to the power station, the tail water from this plant being still at sufficient height to be carried on by water race and again used for monitor and hydraulic elevator work at Manzane Creek, a new working-place started up in June. The cost of this new scheme was £3,486 10s. 1d. Gravel pumping: The three 8in. centrifugal gravel pumps ran 71.33 per cent. of the time that power was available, elevating on the average 24.57 cubic yards per hour to an average height of 36.63 feet. The total quantity of ground removed by these pumps amounted to 437,197 cubic yards. The average efficiency of the three pumps on the whole year's run was 22.84 per cent. (on the same basis as previous years), as compared with 22.15 per cent. for the previous year. Nozzle pumping: A pressure nozzle pump was used in connection with one of the gravel pumping plants for seven months. Another pressure nozzle pump was started at the close of the year (middle of June) at Foy's Creek, and accounted for 6,652 cubic yards of previously worked ground. Hydraulic elevating: A 9 inch elevator was in use at Stable Creek during the year. The average efficiency of this elevator was 19.65 per cent., as against 12.97 per cent. for the previous year and 16.58 per cent. for the year before. A 12in. elevator was installed at the Manzane Creek just before the close of the year. The elevators accounted for 65,672 cubic yards. The gravel pumps did 16 per cent. more work than the hydraulic elevators for a given quantity of water power. Hydraulicizing: Three Hill Creeks were worked by monitors during a portion of the year. This work accounted for 75,529 cubic yards. Ground sluicing and handwork: 292,064 cubic yards of ground were removed by ground sluicing and sluicing in small boxes from 13

different workings where no water under pressure was available. Gravel syphon: The remaining 38,422 cubic yards of ground were removed by means of an entirely novel method of working which has recently been installed. This consists in lifting the gravel and boulders, broken down by a monitor, by means of a syphon to a height of 10 to 15 feet over a granite boss crossing the Mbabane River (which has dammed back a large "flat" of gravel on its upper side) and delivering it through some 800 feet of 8 inch and 9 inch syphon pipes to the sluice boxes fixed at the discharge end of the syphon, the difference of level from suction to discharge being from 12 to 19 feet. The first month's work showed that 23 cubic yards of gravel per hour were lifted 12 feet with 143 cubic feet of water per minute, the only attention required being the services of one native at the suction pump. The effect of this installation has been entirely to eliminate the necessity of installing a gravel pumping plant and power line, or, in other words, it sets free a gravel pumping plant for work at another place where syphon action is not available, and enables the output to be increased accordingly. During the last two months of the year the ground dealt with by the syphon was full of boulders, though rich in tin, so that owing to the small yardage cut the average cost per cubic yard appears high. It will thus be seen that the total yardage was accounted for as under:—Gravel pumps, 437,197 cubic yards, equal to 47.7 per cent., at 7.849d. per cubic yard (including head office expenses); hydraulic elevators, 65,672 cubic yards, equal to 7.2 per cent., at 8.809d. per cubic yard; syphon, 38,422 cubic yards, equal to 4.2 per cent., at 8.069d. per cubic yard; total ground cut and elevated, 541,291 cubic yards, equal to 59.1 per cent., at 7.959d. per cubic yard; hydraulicizing, 75,529 cubic yards, equal to 8.3 per cent., at 6.959d. per cubic yard; ground sluicing and handwork, 292,064 cubic yards, equal to 31.9 per cent., at 6.433d. per cubic yard; pressure pump (Foy's), 6,652 cubic yards, equal to .7 per cent., at 10.859d. per cubic yard; total ground cut but not elevated, 374,245 cubic yards, equal to 40.9 per cent., at 6.617d. per cubic yard; grand total, 915,536 cubic yards, equal to 100.0 per cent., at 7.413d. per cubic yard. The estimated reserve position at the end of June, 1917, is as follows:—Ground proved by drilling, 1,328,932 cubic yards, average value 1.27 lbs. M.T. per cubic yard; Hill Creek ground (value from past work), 1,963,929 cubic yards, average value .73 lbs. M.T. per cubic yard; reserve practically assured, 3,292,861 cubic yards, average value .95 lbs. M.T. per cubic yard. In addition there is a further extent of tin-bearing ground amounting to some 4,385,000 cubic yards, of which the quantity has been estimated but the value not ascertained; whilst there still remains a considerable extent of ground which has not been yet examined. It is to be noted that while the total yardage cut during the year was 915,536 cubic yards, the reserve was only depleted to the extent of 602,663 cubic yards and the unvalued ground to the extent of 111,392 cubic yards, so that actually 201,481 cubic yards were cut outside the limits of estimated reserve ground. The effect of this is to reduce the average grade of recovery; but as long as the excess ground thus found in the course of working is profitable, it is clearly the proper policy to work it. The drilling of new ground was not undertaken during the year, but several new areas will be drilled during the coming year. A nozzle pump having now been installed at Foy's area, hitherto without water under pressure, a new working having been started at Manzane Creek, and an additional working place being afforded by the use of the syphon, taken in conjunction with the exceptionally wet winter season, may be taken as auguring favourably for the output of the coming year.

### Victoria Falls Power Co.

The directors' report of the Victoria Falls Power Company shows net earnings last year of £800,000 (in round figures), being an increase of £70,000 on the previous year. The sum of £150,000 was placed to reserve, and dividends declared of 5 per cent. on ordinary, and 10 per cent. on preference shares. A sum of £72,000 was carried forward.



## OFFICIAL REVIEW OF RAND MINING CONDITIONS.—I.

### Extracts from Reports of Inspectors of Mines.

From the annual report of the Johannesburg Inspector of Mines (Mr. M. Fergusson), the Government Mining Engineer extracts the following:—

**White Labour.**—The shortage of skilled men experienced during the year 1915, due to the large numbers of this class joining the forces fighting for the Empire, was, if anything, intensified during the past year, and, consequently, in order to keep things going, recourse was had to the best available substitute. Considering the lack of practical mining knowledge of many of the men taken on, I think that it is a matter for congratulation that the accident rate for the year is not higher. The ordinary wastage prior to the war was to a certain extent made up by the influx of miners from overseas, but this influx has now entirely ceased and the mines are largely dependent on men trained in this country.

**Native Labour.**—The supply of native labour was plentiful and well up to requirements at the commencement of the year, but there has been an almost gradual falling off, and in December there was a decrease on January's figures of about 10 per cent., consequently the mines are below their required complements. This has resulted in the reintroduction of machines in a great many of those stopes which at the commencement of the year were being worked with hammers.

**Prevention of Dust.**—Improvements in connection with the prevention of dust have been carried out during the year chiefly in the enlargement of the pipe services and the provision of underground tanks and reservoirs. The water pressures at terminals are now generally found to be adequate for the purposes required, but in certain instances more attention is perhaps necessary to the clarification of the water used for water-feed machines and atomizers. It is satisfactory to note that a great improvement has taken place since the last report was framed, and it is now possible to give a definite assurance that the necessity for the prevention of exposure to dust is thoroughly realized by the managements generally and by the majority of miners, both white and coloured.

**Ventilation.**—The ventilation of the mines of this district is good on the whole. Several fans have been installed underground during the year. Only one serious complaint concerning ventilation was received during the year; this was duly reported on. It was unfortunately necessary in the report for last year to draw attention to the unsatisfactory condition of the workings in several mines in regard to the state of the atmosphere on the night-shift. It may now be stated that these matters have received attention; better supervision has been given to the night-shifts, and hours of working and conditions of ventilation have been altered, with the result that there is now little cause for complaint.

**Sand Dumps.**—The tailings dumps on surface have not received that amount of attention which is considered necessary or reasonable, consequently the dust in windy weather is at times a source of considerable public annoyance. It is claimed that the solution of salt and slimes with which some of the dumps had previously been treated is not satisfactory, as it had no permanency in keeping down the dust. A circular letter was therefore addressed to the mines to take adequate steps to prevent this dissemination of dust.

**Sand Filling.**—Only four mines in this district continued sand filling operations during the year, viz.: City Deep, City and Suburban, Crown Mines, and Wolhuter. With the exception of the Crown Mines, the amount of sands sent underground was quite small. Those mines which originally adopted this method of roof support appear to have practically abandoned the process. It was introduced chiefly as a means of steadying the ground through which the shafts were sunk, and this having been accomplished further filling has been suspended.


**Sub-Inspectors.**—The two sub-inspectors of mines who were appointed during the year commenced work in this inspectorate in August. Their duties are to visit and inspect the underground workings of mines as directed by the senior inspector for the district, unaccompanied by any mine official, to report daily in writing in detail upon the workings visited and the conditions

noted, and to discuss matters connected with safety and health with officials and miners. They are not empowered to issue instructions, but are not debarred from making verbal suggestions to either men or officials for the improvement of conditions. A copy of their daily report is furnished to the manager of the mine concerned. Mines with high accident rates have been chosen for first attention, and it is found that a great deal of useful information has been gained from the reports of these officials who, after a few weeks of daily visits to the workings of any particular mine, enable the Department to arrive at more definite conclusions in regard to measures for safety and health than would be possible with the more rare visits of the departmental inspector at irregular periods. From this point of view the appointment of the sub-inspectors has been entirely satisfactory, but the impression held in some quarters that working men officials would be more easily approachable than the ordinary departmental inspector and would be the recipients of many complaints from workmen, who would otherwise have no channel for their grievances, has not been borne out in practice.

**Accidents.**—The accident death rate for 1916 is in excess of that for any year during the past five years. This is considered to be largely due to the decreasing skill of the white miner. The all-round skilled miner is disappearing from these fields through the stoppage of immigration from other mining countries, and the local man, who is now engaging for work underground, lacks the training necessary and the opportunity for acquiring such training, partly by reason of the lack of facilities and partly on account of the bad system in connection with the bringing on of learners in an immature state. The death rate of the City Deep mine unfortunately continues to be considerably above the average for the district. There was a decided improvement in 1915, in comparison with the four preceding years, but the rate has again fallen back and is 5.82 per 1,000 compared with 4.76 per 1,000 for 1915. The average death rate for this mine for the last six years is no less than 6.49. There were during the year 19 fatal accidents resulting in 33 deaths; of these seven accidents alone accounted for 21 deaths. Of the 19 separate accidents, eight resulting in 19 deaths were due to the fault of gangers. In five cases certificates were suspended, and in two cases convictions were obtained in the Magistrate's Court and fines inflicted. The analysis of the accidents is as follows:—

	Accidents. Deaths.	
Drilling into misfired holes .....	3	9
Falls of hanging .....	3	4
Overwind .....	1	4
Breaking of chain tackle .....	1	3
Charging of holes .....	1	3
Various .....	10	10

It is unfortunate that this mine continues to bear a high death rate notwithstanding close inspection by this Department. There is, however, one redeeming feature to record, and that is that accidents due to falls of hanging have materially decreased during the year. This in former years was a serious trouble, and the fact of a decrease having taken place shows that the management is endeavouring to improve the underground condition. The sub-inspectors of mines spent a few weeks at the mine during September and



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reported that the measures taken for the observance of discipline and safety were satisfactory. The death rate of the Village Deep mine is 5.58 per 1,000 as compared with 3.65 per 1,000 for 1915. There were 19 fatal accidents, resulting in 27 deaths. Of these 19 accidents, 10 accounting for 15 deaths were purely accidental, and nine accidents accounting for 12 deaths were due to the fault of gangers or other cause, and in three of these cases the accidents were due to the fault of the persons killed. There were three accidents in connection with which more than one death resulted. One accident causing four deaths was due

to a pressure burst. One causing three deaths was due to drilling into a misfired hole, and one causing three deaths was due to a fall of hanging. In four cases certificates were suspended and in three cases convictions were obtained in the Magistrates' Courts and fined inflicted. The sub-inspectors of mines were stationed at this mine in December and will continue to carry out daily inspections underground until they are able to report more satisfactory conditions; meanwhile pressure is being brought upon the management to exercise better discipline and control.

(To be continued.)

## ROOIBERG MINERALS' ANNUAL REVIEW.

THE report of Mr. E. J. Way, Consulting Engineer to the Rooiberg Minerals Development Company, Ltd., is as follows:—I beg herewith to submit my report for the financial year ended 30th June, 1917. The following are the principal matters of interest with which I propose to deal:—

(1) Results of operations, 1916-1917, as compared with the results of the previous three years; (2) ore reserve position; (3) alluvial sluicing; (4) percentage of extraction of metallic tin; (5) general position and prospects of your company. (1) Results of operations, 1916-1917, as compared with the results of the previous three years:—The following shows the principal results of working for the past four years: Tons milled: 1913-14, 40,643; 1914-15, 37,263; 1915-16, 36,460; 1916-17, 38,557. Long tons metallic tin produced (given in long tons as buyers deal in long tons): 1913-14, 886.6; 1914-15, 730.9; 1915-16, 706.5; 1916-17, 645.24. Revenue per ton: 1913-14, £3 15s. 3d.; 1914-15, £2 18s. 8d.; 1915-16, £3 4s. 3d.; 1916-17, £3 2s. 1d. Total working costs per ton, including realisation charges: 1913-14, £2 7s. 9d.; 1914-15, £2 2s. 8d.; 1915-16, £2 10s. 4d.; 1916-17, £2 9s. 9d. Total working profit: 1913-14, £55,805 8s. 10d.; 1914-15, £29,802 19s. 11d.; 1915-16, £25,396 18s.; 1916-17, £23,675 15s. 3d. Grade of ore milled: 1913-14, 3.18 per cent. M.T.; 1914-15, 2.82 per cent. M.T.; 1915-16, 3.02 per cent. M.T.; 1916-17, 2.85 per cent. M.T. Percentage extracted: 1913-14, 78.81 per cent.; 1914-15, 78.27 per cent.; 1915-16, 77.95 per cent.; 1916-17, 79.80 per cent. Average price at which metallic tin was sold (estimated): 1913-14, £174; 1914-15, £151; 1915-16, £161; 1916-17, £191. (2) Ore reserve position: The estimates show that the payable ore available at the end of June, 1917, was 11,248 tons of an average assay value of 2.33 per cent. metallic tin. The manager points out that this ore is scattered in small quantities over the mine and prospecting workings. During the year no extensive payable bodies were discovered. The manager gives full details of the crushing results for the year, which show the sources from which ore was obtained for the mill. The ore mined for a period of eight years and three months ended 30th June, 1917, is as follows:—Ex reserves, 57,739 tons, or 26.1 per cent.; ex supplementary fillings and lodes in excess of reserves and from development faces, 126,452 tons, or 57.5 per cent.; ex prospecting dumps, 36,303 tons, or 16.4 per cent.; total, 220,494 tons, or 100 per cent. (3) Alluvial sluicing: The work done by the experimental plant has given encouraging results. Several fissures have been exposed by laying the rock bare in this way, but up to the end of the year nothing had been encountered which gave promise of yielding much ore for the mill. The manager gives full particulars of the tin won from this source. It is hoped that as these works extend, payable fissures may be encountered. (4) Percentage of extraction of metallic tin: The extraction during the year in the reduction works, based upon the assumption that the value of the final tailing plus recovery gave the correct value of the battery pulp, was 79.30 per cent. as compared with 77.95 per cent. for the previous year, an increase of 1.85 per cent. The final tailing leaving the mill after treatment averaged .47 per cent. metallic tin. Towards the end of the year, the additions to the slime plant, mentioned in my last annual report, were put into commission, viz., 48 rag frames and 3 round frames, together with the necessary dewaterers and

launders, and one 16 ft. double dipper wheel. Since the starting up of this plant there has been a further satisfactory decrease in the value of the final pulp, which has been reduced to as low as .25 per cent. metallic tin, with an average for this short period of .37 per cent. metallic tin. Careful investigations are being continued with the object of finding further means of lowering the value of the final pulp. The experiments carried out by a neighbouring mine with a continuous centrifugal separator have been very carefully watched, but no definite conclusions can yet be arrived at with regard to the treatment of material from the property by this means, as there are several mechanical alterations necessary before the machine can be put into continuous commission. There is no doubt that up to date the most successful of all the appliances for dealing with the very fine product found in the slime, is the rag frame. (5) General position and prospects of the company: No effort was spared during the year to carry on development and exploration with the greatest possible vigour. Last year this policy resulted in the ore reserve position being improved, but during the year under review no discovery of any importance has been made. That the estimate of possible ore was a conservative one, is shown by the fact that the company has been able to keep its mill fully employed some two months longer than was anticipated; and it was unfortunately impossible to foresee that there should be such a sudden falling off in development values during the year under review. In an occurrence of the kind which the company has worked successfully for so many years, it is only reasonable to expect that there would be great fluctuations in the quantity and value of the ore exploited; but there is promise that payable ore in quantity may again be discovered as development and prospecting work proceeds. Last year I said that I believed that the venture was in a sounder position than it had been at any time during the past three years. This statement was based entirely upon the amount of the ore reserve, viz., 28,659 tons, which at that time was greater than had at any time been accumulated in the history of the mine. It is unfortunate that, for the reasons stated, it was impossible to maintain this position, but there have been periods in the past when the actual ore reserve position has been very low, yet fresh discoveries have been made which have put it upon a satisfactory footing; and this may occur again.

### Zaaiplaats Tin.

The results for the month of September, 1917, at Zaaiplaats were as follows:—Days run, 24; ore milled, 1,547 short tons; concentrates won, 38 long tons; average value of concentrates, 70 per cent. M.T.; estimated profit for the month, excluding Government taxes on profits, £1,442 8s. 11d.; add adjustment in respect of estimated values of previous shipments, £303 10s. 3d.; profit declared for the month, £1,745 19s. 2d.; capital expenditure, £299 16s. 11d. At the month end there were estimated to be 34.2 long tons of tin on hand in various stages of treatment, which have been taken into account at £246 per ton. During the month 14 tons of ingot tin were disposed of.



## GOVERNMENT MINERS' TRAINING SCHOOLS: ANNUAL REPORT.

THE following is an extract from the annual report of Mr. M. Fergusson, Chairman of the Board of Control of the Government Miners' Training School, included in the annual report of the Government Mining Engineer issued this week:—

On 31st December, 1915, there were 42 apprentices on the books; on 31st December, 1916, there were 63. Since the opening of the school in July, 1911, apprentices to the number of 302 have signed their indentures, i.e.: To the end of the year 1915, 242; during the year 1916, 60; total, 302. *Disposal of Apprentices.*—The following table of figures shows how the 302 apprentices have been disposed of: Resigned at end of probationary period: To the end of 1915, 88; during 1916, 15; total, 103. Resigned voluntarily: To the end of 1915, 33; during 1916, 3; total 36. Resigned or discharged as medically unfit: To the end of 1915, 14; during 1916, 13; total, 27. Dismissed for misconduct or as unsatisfactory: To the end of 1916, 50; during 1916, 6; total, 56. *Completion of indentures:* To the end of 1915, 15; during 1916, 2; total, 17. *In residence:* To the end of 1915, 42; during 1916, 21 (increase on totals for previous years); total, 63. *Totals:* To the end of 1915, 242; during 1916, 60 (increase on totals for previous years); total, 302. The following figures show the number of apprentices as regards their place of origin since the opening of the school: Johannesburg.—Joined, 71; resigned or discharged, 61; remained at school, 10. Transvaal (rest of).—Joined, 85; resigned or discharged, 56; remained at school, 29. Cape Province.—Joined, 94; resigned or discharged, 68; remained at school, 26. Orange Free State.—Joined, 43; resigned or discharged, 29; remained at school, 14. Natal.—Joined, 9; resigned or discharged, 8; remained at school, 1. *Totals:* Joined, 302; resigned or discharged, 222; remained at school, 80. *Completed Apprenticeships.*—During the year under review two of the apprentices completed their course of training and on successfully passing the final examination the Training School Certificate of Competency was issued to: W. C. Coombe, of Johannesburg; F. Niemann, of Boksburg. With the addition of those 15 up to the end of 1915, seventeen apprentices have now qualified from the Training School. The health of the school continues to be satisfactory, no serious epidemic of disease having occurred during the year. For the sixth year in succession the absence of any serious accident has to be recorded and the Board takes this opportunity of complimenting the officials on maintaining this excellent record. "Safety First" has throughout been one of the foremost considerations. The undertaking of military operations in German East Africa resulted in many apprentices enlisting in the various contingents, the number at work being at one time seriously reduced in consequence. *Evening Classes and Lectures.*—Lectures by the superintendent are given four evenings a week on all subjects connected with mining. At frequent intervals a review or examination is held on the subjects chosen by the superintendent in his lectures and apprentices are required to write of what they know about—(1) support of the hanging-wall during operations; (2) location of shafts and diamond drilling; shaft sinking and timbering; (3) breast or longwall stoping with retreating and advancing methods; (4) back stoping under shrinkage and resueing methods; (5) stope and drive timbering; drive sets; spiling through loose ground; (6) putting in stope boxes, platforms; (7) building of packs and pigsties; (8) square sett timbering in stopes; timbering in swelling ground; spliced stull timbering; various methods of supporting and timbering loose hanging throughout the mine; (9) back and underhand stoping with machines and hammers; (10) explosives and their use; exploding strength under different methods; (11) rigging of bars; collaring of holes and running machines; (12) Mines, Works and Machinery Regulations; (13) ambulance first aid and hygiene; (14) safety first. In connection with these lectures, illustrations and demonstrations are given where possible so that apprentices may thoroughly grasp what knowledge is being imparted to them. *Donation of £10 Prize.*—The Board has to thank Mr. C. D. Leslie, of the Consolidated Gold Fields of South Africa, Ltd., for donating a prize of £10 to the school. This prize will be presented to the apprentice showing superiority in (1) efficiency and consistency; (2) ability in examinations; and (3) good conduct in and out of the mine. *Blasting and First Aid Certificates.*—During the year 16 apprentices presented themselves to the Commission of Examiners for Blasting Certificates, and all were successful in passing the examination and obtaining their blasting certificates. Red Cross Certificates were awarded after examination by the South African Red Cross Society to Apprentices G. Dove, F. R. Creighton, and C. Suyman respectively. It is satisfactory to report that a great improvement has taken place during the year both in the number of apprentices engaged and in the class of work performed. This improvement is directly due to the alterations which were sanctioned by the Honourable the Minister on the recommendations of the Board of Control. In fact, the advantages of the training now offered have become so widely known that at the date of writing the Wolluter School has a full complement and large numbers of further applications are continually being received. The attention of the mining industry has been attracted to the useful purpose which the Government is serving in training skilled miners, and towards the end of the year under review the Chamber of Mines approached the Honourable the Minister for Mines and Industries with a view to participating in the scheme on a much enlarged scale. This proposal having been agreed to a new Board of Control was appointed by the Minister which formally took over the whole training scheme for miners at the

commencement of the new year. The new Board consists of representatives of the Government and the mining industry, and is, at the date of writing, engaged in founding a new training school at the Bantjes Mine, where suitable arrangements are being made for the housing and training of a further 50 apprentices to commence work. This institution will be run in conjunction with the old Wolluter School and with new additional schools which will be formed as required. In order to ensure that applicants for work in the mines shall receive the training which it is necessary for them to acquire to enable them to carry out their duties skilfully and safely the Chamber of Mines has decided that no learners shall be engaged at individual mines, as has heretofore been the custom, under the age of 23 years, and this age will be gradually increased until probably all learners in time will be required to go through the Training School before being accepted for work. In this connection it may be not inappropriate to quote some remarks from the report of the Economic Commission (January, 1914, par. 43). It is there stated:— "43. Very few of the younger generation seem to seek employment in the mines. The supply of men underground, apart from immigrating miners, is largely kept up by learners who do not go through a regular apprenticeship and are not all young. A statement received from the Transvaal Chamber of Mines shows that underground on the Witwatersrand there were two apprentices and 451 learners to 7,412 others, exclusive of contractors. In connection with the learners two criticisms were made which are worth recording. The one is that the usual probationary period of eight months is not sufficient for a miner to acquire all-round expert knowledge, and that to hurry the learner into a position of responsibility is to increase danger and keep down the output. Both mine managers and miners expressed themselves strongly on this point. The other criticism which bears on the first is that sufficient attention is not devoted to learners. . . . The Commissioners go on to state in paragraph 44: "44. . . . Your Commissioners were also informed that apprentices were seldom looked after as they should be, and that not uncommonly they were refused because of the trouble they gave. Finally, complaint was made of the stringent limitation of apprentices insisted upon by certain trades unions. Neglect to give a proper training is apt to mar the industrial system in a country which has barely established its industrial traditions and where there is less certainty about the future than in other countries. The matter of apprenticeship, however, must be placed in the forefront of problems to be handled." The above-quoted remarks are borne out by figures supplied by the Examinations Office of the Mines Department, which show that between 60 per cent. and 70 per cent. of the learners, applying for blasting certificates, after spending six or eight months' probationary period in the mines, are over 25 years of age, and there appears to be little doubt that the majority of these men do not take to the employment on account of its attractions, but because they have failed in other callings. They are forced into the mines through stress of circumstances as a last resource, and in many cases doubtless undertake the work with feelings of antipathy, largely due to their lack of skill, having every intention of quitting their task at the earliest opportunity. It is confidently believed that the systematic training at the schools will remove all prejudice and inculcate a real interest in the minds of the wider population who will realise that mining is a worthy and not unhealthy calling. The Economic Commission's Report also draws attention (paragraph 45) to the fact that skilled trades are largely closed to the children of the agricultural classes, for the earnings of apprentices for the greater part of their apprenticeship must be insufficient to keep them. If they come from country districts they must live away from home, which is an expense, and the dangers to which they are exposed when left to themselves in an industrial town cannot be ignored. The objections referred to above are met at the Government Miners' Training Schools by the provision of quarters and adequate supervision, and of the payment of a wage which is sufficient to defray all living expenses in addition to leaving the apprentice a few pounds in hand at the end of the month, whilst with diligent work under the bonus system considerable sums may be earned. A question which has been the subject of a great deal of talk and discussion amongst a section of the mining community is the colour bar, which arose originally as a natural barrier between the white and coloured races in this country on account of the difference in civilisation. There is to-day a real and growing fear amongst a section of the workers that this bar is being encroached upon and is in danger of being broken down. Such a contingency is not desired by either race, but it is apparently not generally recognised that the solution is a simple one and lies in the hands of the workers themselves. If the white so-called skilled workman will exert himself to become thoroughly skilled and efficient he can easily maintain his position of superiority and at the same time the unskilled workman will be able to rise in his own sphere without the possibility of any

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encroachment on the scope of the skilled miner. The result will be the reconstruction of a natural strong and unassailable barrier. This course is obviously preferable to the converse which, there is some reason to fear, is taking place at the present day; and consists in the white man descending to a lower level as regards skill and efficiency whilst demands are made to force down the unskilled race (whose natural tendency is to rise as it gains in civilisation and knowledge), in order that an artificial barrier may be bolstered up for the benefit of the white workman who looks upon his superiority as a right, but makes little attempt to maintain it by his own exertions. The systematic training of miners which is now being undertaken in the Government Miners' Training Schools affords facilities which, if advantage is taken of them by those desiring to engage upon work in the mines, will go far towards providing a solution of the problem above referred to. The new Board continues to carry on the work of the school under the same conditions as were laid down by the former Board of Control and practically the same form of indenture is in force. It is a matter of considerable satisfaction that the services of the principal and instructor have been retained and Mr. Wonnacott, whose outstanding ability and sound organisation as Principal of the Wolhuter School were fully recognised and appreciated by the old Board, has been appointed Acting Superintendent of the schools under the new control. Apprentices are not accepted under the age of 16 years. They must be of good physique, especially in regard to the respiratory organs. Intending applicants,

if living at a distance from Johannesburg, must submit a medical certificate of general fitness from their doctor and, in addition all applicants must go before the Medical Bureau appointed under the Miners' Phthisis Act for examination before being allowed underground. The course of training consists of two years' practical work underground, which embraces all the more important branches of mining work together with two periods of two weeks each in the fitting shops on surface, and evening lectures two or three times a week with written examinations periodically. It will thus be seen that apprentices gain not only a sound knowledge of practical mining but also a useful training in general education, elementary mathematics, and the theory of mining. Physical culture classes and other healthy forms of recreation are provided, and, as the apprentices reside in the school buildings and are at all times subject to the discriminating supervision of the principal, parents and guardians may rest assured that every care is taken of the welfare of apprentices. The Government Miners' Training Schools, though formed for the purpose of training skilled miners, are not strictly limited in scope. There are amongst the present body of apprentices a number of well-educated youths whose ambition it is to rise to the top of their profession and who are preparing themselves for a higher technical education by obtaining a preliminary grounding on the practical side in advance. This is undoubtedly a wise course to pursue in studying a subject such as mining, and the Board of Control will afford facilities to apprentices showing special aptitude.

## CORRESPONDENCE AND DISCUSSION.

### Sailors' Day Fund.

To the Editor, *South African Mining Journal*.

Sir,—I beg leave to inform you that the auditors, Messrs. Aiken & Carter and C. L. Andersson & Co., who have kindly given their services gratuitously to the above-named fund, have passed audited accounts as follows:—Expenses: Advertising, £8 16s. 6d.; stationery, £6 0s. 6d.; cables, £6 12s. 6d.; postages and telegrams, £5 3s. 2d.; sundry general expenses, £4 10s. 1d.; programmes, £36—£67 2s. 9d.; less advertisements in programme, £37 10s.; total, £29 12s. 9d.; amounts remitted to London, £22,594 1s. 2d.; total, £22,623 13s. 11d. By donations: Johannesburg, £21,172 17s.; elsewhere in Transvaal, £1,450 16s. 11d.; total, £22,623 13s. 11d. I wish to state that Mrs. Solomon, the treasurer of the street collection in Johannesburg on March 10th for the Sailors' Day Fund, has informed me that the amount forwarded direct to London by the Guild of Loyal Women was £2,560, so that the total contributions made to this most excellent fund on March 10th was £25,183 13s. 11d., and amounts are still coming forward to the Chairman of the Finance Committee, who will be glad to receive further contributions. Of the amounts received from "Elsewhere in Transvaal," Rustenburg subscribed £26; Amersfoort, £5; Potchefstroom, £63 16s. 10d.; Klerksdorp, £47 13s.; Vereeniging, £154 6s.; Standerton, £22; Krugersdorp, £279 12s. 3d.; Bloemfontein, £32 17s. 6d.; Bethal, £125 4s. 6d.; the balance being made up from various centres on the Reef. Many of the towns in the Transvaal sent their contributions directly to London—the largest of which was £1,150 11s. 4d. sent from Pretoria.—Yours, etc.,

KENNETH AUSTIN, Hon. Secy.

8th October, 1917.

### U.S.A. and Belgian Charities.

To the Editor, *South African Mining Journal*.

Sir,—The "National Committee for Relief in Belgium" recently announced that they were suspending their appeals in this country, as the U.S.A. Government had taken on itself the work of relieving the Belgians in Belgium. This announcement, although quite clear in itself, has left a widespread impression that all other Belgian charities had also stopped, and in consequence there has been a marked falling off in the subscriptions to other Belgian funds. I shall esteem it a favour if you will kindly make it clear to your readers that the work taken over by the U.S.A. Government is that of relieving Belgians in Belgium, and that there are other numerous charities, which are still being carried out in this country. The objects of some of these may be mentioned: (1) Care of the broken-down Belgian children, brought from Belgium into Holland for treatment. (2) Care of the wives and children of war prisoners and interned Belgian men in Holland. (3) Instruction of blind and maimed soldiers in new trades, in England, France, and Switzerland. (4) Provision of elementary comforts for Belgian soldiers in the trenches,

who are cut off from their families in Belgium. (5) Care of the soldiers in the training camps and the wounded in the hospitals. (6) Care of the men who have escaped from Belgium to enlist in the Belgian Army and who are without means. (7) Provision of necessities and comforts to Belgian interned soldiers in Holland. (8) Provision of necessities and comforts to Belgian prisoners of war in Germany. The above are all cases in which it is impossible for aid to be obtained from Belgium, and unless these charitable institutions are assisted by the British public, the Belgian soldiers will not have the necessary comforts, and the plight of the poor unfortunate Belgian civilians will be miserable in the extreme. The work undertaken by the U.S.A. Government does not cover these cases at all. We trust, therefore, that the generous British public will continue their subscriptions as before.

We are, Dear Sir,  
Yours truly,

EMILE VANDERVELDE,  
Belgian Minister of State.

For the "British Gifts for Belgian Soldiers," 32, Grosvenor Place, S.W.1, London; G. Vandermeeren, hon. sec.

For the "Working Men's Belgian Fund" and "Oeuvre de la Santé de l'Enfance Belge" (Belgian Children's Fund in Holland), 32, Grosvenor Place, S.W.1, London; Geo. J. N. Rogers, Chairman.

## ANSWERS TO CORRESPONDENTS.

All enquiries addressed to the Editor must bear the writer's name and full address. We cannot reply to enquiries by letter, but telegrams with replies prepaid will be answered. Correspondents are requested to write their names and pseudonyms distinctly.

"Mine Captain."—We know nothing about the finances of the citrus proposition in question, and agree with you that several of the statements in the glowing "write up" in question are obviously coloured to suit the share-hawkers' ends.

"W. L." (Capetown).—(1) 10 per cent. (2) Dividend announcement now due.

"Shareholder."—The circulars are ready and will be issued in a few days, setting forth the details of the scheme.

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# ANNUAL REPORT OF THE GOVERNMENT MINING ENGINEER.—I.

## Variety of Industrial Questions Reviewed.

In dealing with the general progress of the Witwatersrand gold mining industry, the Government Mining Engineer writes, *inter alia*, as follows:—

**Working Costs, etc.**—Comparisons with the year 1915 show that the average working cost per ton increased by 8d., and that the grade increased from 26s. 3d. to 26s. 8d., the working profit being consequently lower by about 3d. per ton milled. Various factors account for the difference between the aggregates of the figures given in columns 3 and 4 and those shown in column 2. Chiefly, it may be mentioned that whilst the cost and profit per ton refer only to those companies rendering returns to the Chamber of Mines, the recovery per ton is calculated on the total gold declared by *all* mines on the Witwatersrand and at the fixed value of £4.24773 per fine ounce. Interest on and redemption of debentures, profits tax, and expenditure charged to capital account are not taken into account in working costs and profits. Allowing for the return during 1916 of some £8,215,667 to investors in Witwatersrand producing mines, in the form of dividends amounting to £7,098,667, redemption of and interest on debentures approximating £868,000, and the repayment of and interest on loans of about £249,000, there is a balance on the working profit for the year of approximately £3,414,334. Of this amount £1,387,729, including special war levy £480,065, were paid in profits tax during the calendar year 1916, and the balance represents expenditure charged to capital account, and to a variety of heads, such as miners' phthisis, oversea taxes, debenture expenses, directors' and auditors' fees, depreciation; donations, etc. Dividends, interest on and redemption of debentures and loans, may be considered as the return on the capital invested in mines, and the balance of revenue as costs. Making this rigid division it would appear that the return on capital invested during 1916 totalled £8,215,667 as against £8,729,068 for 1915.

**Mines Closed Down.**—The West Rand Central ceased operations in May. The following particulars in connection with this mine are compiled from various sources of information:—Reef-bearing area in claims, 35; tons milled—(a) total, 417,541; (b) per claim, 11,930; value of gold recovered—(a) total, £664,060; (b) per claim, £18,973; dividends declared—(a) total, £17,973; (b) per claim, £514; (c) per ton milled, 10.33d.; costs (gold recovered, less dividend), £646,087.

**Crushing Capacity.**—The position of Witwatersrand companies grouped according to the scale of operations is as follows:—

	Tons per month.	Dec., 1911.	Dec., 1912.	Dec., 1913.	Dec., 1914.	Dec., 1915.	Dec., 1916.
No. of mines crushing over 200,000	...	1	1	—	1	2	—
.. .. 150,000	...	1	2	2	2	1	3
.. .. 100,000	...	1	1	1	—	1	1
.. .. 90,000	...	—	—	—	1	—	—
.. .. 75,000	...	—	—	—	—	—	1
.. .. 60,000	...	4	2	2	2	4	5
.. .. 50,000	...	3	8	4	9	11	8
.. .. 40,000	...	5	5	9	10	5	6
.. .. 30,000	...	11	8	8	4	7	6
.. .. 20,000	...	11	10	8	11	12	13
.. .. under 20,000	...	26	22	18	14	11	9

**Subsidence.**—Durban Roodepoort Gold Mining Company, Limited.—On the 19th August, 1916, a subsidence occurred in the workings of the Durban Roodepoort immediately adjoining those in which collapses occurred in November, 1910, and February and March, 1914. Several cracks appeared on surface in the positions shown by vermilion on the accompanying plan, which at the points marked "A" and "B" were as wide as 2½ inches over a length of 10 feet, after which they lessened and died out.

**Small Concerns.**—The returns made to this office show the following comparative figures from gold mining concerns

on which less than 10 stamps were run.—Tons treated during the year: 1915, 67,788; 1916, 78,099. Value of gold won during the year: 1915, £82,217; 1916, £86,368. Number of producers: Dec., 1915, 30; Dec., 1916, 37. Stamps dropping: Dec., 1915, 109; Dec., 1916, 114. Whites employed by above producers: Dec., 1915, 101; Dec., 1916, 89. Coloured employed by above producers: Dec., 1915, 1,136; Dec., 1916, 1,171. Taking all the concerns which may be considered as run by small syndicates or private people, excluding comparatively large companies such as the Nigel, Sub Nigel, Glynn's Lydenburg, Sheba, Transvaal G.M. Estates, etc., the following comparisons are arrived at for the two years:—Tons treated during the year: 1915, 204,389; 1916, 248,884. Value of gold won during the year: 1915, £220,343; 1916, £229,003. Number of producers: Dec., 1915, 42; Dec., 1916, 51. Stamps dropping: Dec., 1915, 241; Dec., 1916, 274. Whites employed by above producers: Dec., 1915, 211; Dec., 1916, 197. Coloured employed by above producers: Dec., 1915, 2,828; Dec., 1916, 2,803.

### MINES IN WHICH THE GOVERNMENT HAS AN INTEREST

(a) *Premier (Transvaal) Diamond Mining Company, Ltd.*—The Government's interest is 60 per cent. of profits and of any assets acquired out of profits. Period—Financial year ended 31st October, 1916. Working operations were resumed on 14th January, 1916. Loads of 16 cubic feet hauled from mine, 946,222; loads of 16 cubic feet of mine ground washed, 854,785; loads of 16 cubic feet of tailings and cylinder lumps washed, 717,736; yield of diamonds, total, 419,947 carats; yield of diamonds, per load washed, 267 carat; value of diamonds produced, £475,856; value of diamonds per load washed, 6s. 0.63d.; value of diamonds per carat, £1 2s. 7.95d.; cost of production, total, £207,224; cost of production per load washed, 2s. 7.63d.; profits, total, £268,632; profits per load washed, 3s. 5d.; capital expenditure, chief items being buildings and sundry plant, £1,753; Government's share of realized profits available for division, £202,387; amount received by Government, £205,736; due to Government at end of year, £127,387. The average depth of the mine is 235 feet, an increase of one foot for the year.

(b) *Government Gold Mining Areas (Modderfontein) Consolidated, Limited.*—The Government's interest is a tax on the profits, less an allowance to amortize capital expenditure, varying between 10 per cent. and 61.25 per cent., according to a sliding scale based on the ratio that profits less amortization allowance bear to the value of the precious metals produced. Period—Financial year ended 31st December, 1916. Tonnage milled, 744,000; value of gold produced, £1,008,779; value of gold produced per ton milled, 27.117s.; working costs, £804,091; working costs per ton milled, 21.615s.; profits, £204,688; profits per ton milled, 5.502s.; estimated share of profits due to Government, £23,715; capital expenditure from inception up to 31st December, 1916, £1,894,194. The duplication of the reduction works was practically completed in October, 1916, but the full additional 100 stamps were not in commission at the end of the year. The payable ore reserves were estimated at 4,930,000 stopping tons, having an assay value of 7.2 dwts. over a stopping width of 75 inches.

(To be continued.)

### MINING EXAMINATIONS.

Study for Certificates as Mine Captains, Mine Managers, Surveyors, Mechanical and Electrical Engineers, and Engine Drivers. Private Tuition and Correspondence Lessons, where personal tuition is impracticable. Practical Mathematics and Electrotechnics. E. J. MOYNIHAN, Consulting Engineer, Cuthbert's Buildings, corner of Eloff and Pritchard Streets, Johannesburg, P.O. Box 2061.

## THE SEPTEMBER GOLD OUTPUT IN DETAIL.

The Transvaal gold output for September was declared by the Chamber of Mines this week at 738,231 ozs., value £3,135,807. This is 18,427 ozs., value £78,272, less than the total for August, but as September was a short month and contained five Sundays, the new output is quite satisfactory. The figures as announced by the Chamber of Mines are as follows:—

WITWATERSRAND.			
	Ozs.	Value.	
August	731,405	£3,106,811	
September	712,881	3,028,128	
Decrease	18,524	78,683	

OUTSIDE DISTRICTS.			
	Ozs.	Value.	
August	25,253	107,268	
September	25,350	107,679	
Increase	97	411	

GRAND TOTAL.			
	Ozs.	Value.	
August	756,658	3,214,079	
September	738,231	3,135,807	
Decrease	18,427	78,272	

### STAMP POSITION.

The number of stamps dropping on the Transvaal gold-fields in September was 9,455, as against 9,422 in August, an increase of 33. The official figures are:—

	Rand.	Outside.	Total.
September	8,990	465	9,455
August	8,967	455	9,422
Increase	23	10	33

### LABOUR FIGURES.

The native labour position shows a slight improvement, the number of boys employed on the last day of September by the W.N.L.A. and contractors being 187,726, as against 187,246 at the end of August. The native labour returns for the past three months are as follows:—

	September.	August.	July.
On gold mines	171,334	170,817	171,653
On coal mines	11,691	11,401	11,381
On diamond mines	4,791	5,028	5,223
Total	187,726	187,246	188,257

### THE CONTRIBUTING MINES.

	Value.	Increase.	Decrease.
Aurora West	£17,628	—	£913
Bantjes Consolidated	23,575	£1,491	—
Brakpan Mines	102,133	1,262	—
City Deep	123,201	—	7,362
City and Suburban	47,163	—	577
Cons. Langlaagte	57,221	—	4,991
Cons. Main Reef	37,414	—	4,728
Crown Mines	224,055	—	18,019
Durban Deep	37,176	—	2,205
Durban Roodepoort	12,964	—	862
E.R.P.M.	140,481	—	6,983
Feireira Deep	66,999	—	2,838
Geduld Proprietary	54,915	—	1,211
Geldenhuis Deep	61,830	1,070	—
Ginsberg	13,537	—	357
Government Areas	159,868	—	10,368
Jupiter	31,888	4,240	—
Knights Deep	65,525	369	—
Knight Central	27,262	—	531
Langlaagte Estate	48,662	—	1,521
Luipaardsvlei	22,950	—	1,207
May Consolidated	—	—	2,209
Miscellaneous	9,416	—	5,898

	Value.	Increase.	Decrease.
Main Reef West	30,435	917	—
Meyer and Charlton	45,884	9,226	—
Modder B.	105,339	3,304	—
Modder Deep	81,089	—	1,045
New Goch	18,645	—	1,754
New Heriot	21,022	—	1,733
New Kleinfontein	78,698	—	1,983
New Modder	124,161	3,279	—
New Primrose	14,514	—	663
New Unified	13,614	64	—
Nourse Mines	50,544	—	5,046
Princess Estate	27,963	—	934
Randfontein	196,712	824	—
Robinson	54,881	—	3,818
Robinson Deep	67,628	2,863	—
Roodepoort U.M.R.	27,746	620	—
Rose Deep	72,776	—	4,159
Simmer and Jack	73,690	—	2,366
Simmer Deep	49,707	16,305	—
Springs Mines	66,205	—	2,727
Van Ryn Estate	43,764	—	1,589
Van Ryn Deep	92,303	—	3,823
Village Deep	77,903	—	3,403
Village Main Reef	37,733	2,473	—
West Rand Cons.	35,473	1,602	—
Witwatersrand	45,328	—	1,745
Wit. Deep	34,283	—	3,844
Wolhuter	40,914	446	—

### OUTSIDE DISTRICTS.

	Value.	Increase.	Decrease.
Nigel	15,725	—	989
Barrett	1,007	—	51
Sheba	7,803	1,142	—
Glynn's Lydenburg	7,408	—	803
T.G.M. Estates	28,010	—	267
Sub Nigel	21,901	—	429
Miscellaneous	25,825	1,808	—

### Consolidated Gold Fields Group.

The following are particulars in regard to the outputs and profits for the month of September of the undermentioned companies of the Consolidated Gold Fields group:—

Company.	No. of Stamps.	Tube Mills.	Tons Crushed.	Gold declared. Fine Ozs.	Total Profit.
Simmer and Jack	320	7	60,900	16,498	£23,101
Robinson Deep	135	8	48,600	15,921	14,262
Knights Deep	400	11	92,500	15,426	567
Simmer Deep	220	10	48,700	11,152	5,060
Jupiter	80	5	24,800	6,407	5,017
Sub Nigel	30	2	9,450	5,156	7,135
Totals	1185	43	284,950	70,560	£55,142

*Reserve Gold.*—Simmer and Jack, 6,550 ozs.; Simmer Deep, 1,460 ozs.; Jupiter, 1,100 ozs.; Sub Nigel, 2,466 ozs.; total, 11,576 ozs.

The sundry revenue included in the above total declared profit is as under: Simmer and Jack, £1,500; Robinson Deep, £16; Knights Deep, £129; Simmer Deep, £608; Jupiter, £1,649; Sub Nigel, £84; total, £3,986.

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**Rand Mines Group.**

The following are the results of crushing operations of the Rand Mines/Central Mining companies for the month of September:—

Company.	No. of Stamps Running.	Tube Mills.	Tons crushed.	Total Fine Ozs.	Total Estimated Profit.	Estimated Working Costs per Ton.
Bantjes Cons. ...	90	3	19,050	5,559	*£598	21/ 10·2
City Deep ...	154	9	59,700	29,001	54,755	22/ 0·7
Cons. Main Reef	110	3	22,100	8,808	10,915	21/ 5·7
Crown Mines ...	660	26	166,000	52,747	55,467	19/ 9·0
Dur. Rood. Dp.	100	3	23,000	8,752	5,038	27/ 3·2
East Rand Prop.	820	25	145,000	33,072	*3,606	19/ 5·5
Ferreira Deep ..	280	7	41,800	15,773	19,778	21/ 10·9
Geldenhuis Dp..	300	7	51,400	14,556	4,988	21/ 7·2
Knight Central..	120	3	24,900	6,418	1,027	20/ 7·3
Main Reef West	110	3	25,050	7,165	4,242	20/ 5·0
Modder B. ...	196	6	40,000	24,799	64,591	19/ 3·2
New Modder ...	180	7	54,000	29,230	67,453	20/ 0·4
Nourse Mines ..	180	5	38,000	11,899	5,909	22/ 11·2
Robinson ...	230	6	50,600	12,920	16,175	14/ 10·2
Rose Deep ...	300	7	59,200	17,133	24,707	15/ 11·2
Village Main R.	160	4	26,600	8,883	11,932	18/ 9·4
Wolhuter ...	120	4	31,800	9,632	10,952	18/ 4·0
Village Deep ...	180	7	51,500	18,340	18,344	22/ 6·4
Wit. Deep ...	205	5	28,700	8,071	*1,221	24/ 3·1

Tls. & averages 4395 140 958,400 322,752 370,848 20/ 3·7

a Includes 4 Nissen stamps. b Includes 16 Nissen stamps.

\* Loss.

**Bantjes Consolidated Mines, Ltd.**—The cost of shaft sinking, hitherto charged to mine development suspense account, has been charged against working costs, totalling £264.

**City Deep, Ltd.**—Tonnage considerably lower owing to continued shortage of labour and to the short month.

**Crown Mines, Ltd.**—Decrease due to drop in tonnage milled owing to shortage of native labour. The grade was 26s. 5d. as compared with 25s. 7d. in August.

**Durban Roodepoort Deep, Ltd.**—The percentage of surface sorting was increased to 17 per cent.

**East Rand Proprietary Mines, Ltd.**—The native labour position at the mine remains extremely unsatisfactory, and the working loss shown is entirely due to that fact. To carry out in its entirety the milling and development programme outlined at the annual meeting held in June last required a large and rapid influx of native labourers. This is not forthcoming, and therefore it would appear that a considerable curtailment and modification of the extensive development programme which was commenced and is still in progress will become necessary. The Board is considering the best method of meeting the present difficult situation in respect to the development programme, and shareholders will be advised in due course.

**Main Reef West, Ltd.**—Increase due to gold from accumulations.

**Modder B. G.M., Ltd.**—Values recovered from certain stopes just now are appreciably above that called for by block valuation.

**Witwatersrand Deep, Ltd.**—During the latter part of September hauling at the East Shaft was suspended for about ten days in order to repair the damage caused by a skip derailment. The ore milled was thereby reduced by about 2,500 tons, which has been accumulated in the stopes. Hauling has been resumed.

**General Note.**—The present shortage of native labour has been accentuated by a short month.

**Barnato Group.**

The results of operations of the Barnato Group for September are as follows:—

Mine.	Stamps.	Tons Crushed.	Revenue from G.O.
Consolidated Langlaagte	150	44,100	£17,221
Ginsberg	75	11,000	13,117
Glencairn	150	21,100	13,118
Government Areas	200	105,000	15,858
Langlaagte Estate	200	44,010	18,002
New Primrose	110	19,500	11,511
New Unified	60	13,800	13,611
Randfontein Central	600	161,550	17,711
Van Ryn Deep	80	11,150	9,230
Witwatersrand	215	37,150	15,320

Totals and averages ... 1830 501,900 £655,245

August totals ... 1830 525,151 £678,787

Mine.	Total Working Costs.	Working Costs per Ton Milled, Shillings.	Gross Profit including Sundry Revenue.
Consolidated Langlaagte	£39,653	17·983	£17,736
Ginsberg	12,133	16·629	1,493
Glencairn	12,335	11·692	1,284
Government Areas	100,159	19·078	69,164
Langlaagte Estate	39,602	17·997	9,195
New Primrose	13,036	13·379	1,556
New Unified	9,618	13·982	1,023
Randfontein Central	161,117	19·983	36,001
Van Ryn Deep	12,410	20·613	51,029
Witwatersrand	31,726	17·080	15,072

Totals and averages... £462,119 18·412 £197,556

August totals ... £474,985 18·079 £209,489

**Monthly Gross Profit, 1917.**—January, £232,859; February, £213,944; March, £225,477; April, £210,598; May, £200,264; June, £206,506; July, £203,650; August, £209,489; September, £197,556.

**Goerz Group.**

Results of operations on the producing mines of this group for the month of September:—

Company	Stamps.	Tons Crushed.	Total Revenue.	Revenue per ton
Geduld Proprietary	80	35,300	£55,323	31/ 4
Modder Deep Levels	70	40,500	80,878	39/ 11
Princess Estate	60	22,000	28,188	25/ 7

Totals ... 210 97,800 £164,389

Company.	Costs.		Profit.	
	Total.	Per Ton.	Total.	Per Ton.
Geduld Proprietary	£35,223	19/ 11	£20,100	11/ 5
Modder Deep Levels	33,312	16/ 5	47,566	23/ 6
Princess Estate	27,266	24/ 9	922	0/ 10

Totals ... £95,801 — £68,588 —

**Geduld Proprietary Mines, Ltd.**—The tonnage milled was affected owing to 40 stamps being hung up for two days consequent on repair work in the mill.

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**Albu Group.**

The following information is officially supplied regarding the September outputs of the producing mines of this group:

Company.	Stamps.	Tons Crushed.	Total Cost.
Aurora West ... ..	80	14,600	£14,346
Meyer and Charlton ... ..	75	12,440	13,363
New Goch ... ..	120	18,700	14,658
Roodepoort United ... ..	80	23,948	26,680
Van Ryn Estate ... ..	140	35,500	28,359
West Rand Consolidated ... ..	100	36,060	33,253

595 141,248 £130,659

Company.	Cost per Ton.	Total Revenue.	Profit.
Aurora West ... ..	19/ 7·8	£17,496	£3,150
Meyer and Charlton ... ..	21/ 5·8	45,286	31,923
New Goch ... ..	15/ 8·1	18,147	3,489
Roodepoort United ... ..	22/ 3·4	27,607	927
Van Ryn Estate ... ..	15/11·7	43,232	14,873
West Rand Consolidated... ..	18/ 5·3	35,089	1,836

£186,857 £56,198

*Meyer and Charlton.*—The smaller tonnage crushed is due to two South Reef drives being blocked by a fall of ground rendering them temporarily inaccessible. This will necessitate packing in South Reef stopes for a period of about one year in order to safeguard them, and will involve a decrease in the normal contribution of South Reef to the mill for a corresponding period. In order partially to make up tonnage for last months, it was necessary to call upon the rich Main Reef Leader stopes to a large extent, with the result that the percentage of the total ore milled taken from the Main Reef Leader amounted to approximately 80 per cent., as compared with 58 per cent. represented by the proportion of this reef in the ore reserves. The profit for September must therefore be regarded as abnormal.

**Nigel G.M. Co.**

The return from this company's mine for September is as follows:—Ore milled, 11,900 tons; gold won, 3,774 fine ozs.; profit, £3,400.

**Glynn's Lydenburg.**

The following are the particulars of this company's output for the month of September, 1917:—Tons crushed, 3,900, yielding 1,736 fine ozs.; estimated value of month's output, £7,255; estimated profit for the month, £2,512.

**Transvaal Gold Mining Estates.**

The following are the particulars of this company's output for the month of September, 1917:—Central Mines: Tons crushed, 11,900, yielding 4,731·359 fine ozs. Elandsdrift Mine: Tons crushed, 1,390, yielding 1,197·364 fine ozs. Vaalhoek Mine: Tons crushed, 1,900, yielding 666·089 fine ozs. Estimated value of month's output, £27,366. Estimated profit for the month, £7,514.

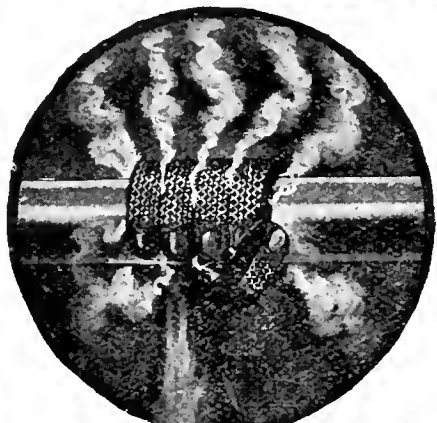
Mr. Kenneth Austin has received an appointment with the Munitions Branch of the War Office, under Mr. W. McC. Cameron, and sails in a few days for England.

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## THE WEEK IN THE SHAREMARKET.

Brighter Closing—Modder Group Active.

The past week looked like being a disappointing record—a brief spurt on Monday followed by a general falling away until Friday morning. The main feature has been the rise in Modder Deeps, Bs., and New Modders. Modder East has been somewhat sticky. The options seem to have settled themselves down to a difference of sixpence between the three-year and four-year. Geduld Proprietary, after a set-back on their last rise, firmed up again. Zaaiplaats had a brief spurt, but Rooibergs have been unaccountably weak. One of the most disappointing stocks to backers is, for the time being, Sub Nigels. In small stocks Lace Props have taken the lead. Van Ryn Deeps have steadily forged ahead, and Government Areas also improved. Springs Mines, after losing 5s. of their recent gains, have begun to pull themselves together again. In outside stocks there have been few variations. Monteleos ranged between 30s. and 35s.; Alkalis, 85s. and 90s.; and South Van Ryns from 10s. 6d. to 11s. 3d. The remainder were practically unchanged. The market hardened all round on Friday morning, with the exception of a few unconsidered trifles, as a comparison of prices will show. Sales: Main Reefs, 16s.; Geduld Proprietary, 40s. 6d.; Lace Props, 7s. 6d. and 7s. 7d.; Modder Options, three-years, 7s. 9d.; four-years, 8s. 2d.; New Eras, 10s. 10d.; Portland Cements, 90s.; Springs, 71s. 6d.; Van Ryn Deeps, 68s. 9d. and 69s.; Zaaiplaats, 9s. 7d. Buyers and sellers: Government Areas, 72s. 9d.—72s. 3d.; Jupiters, 4s. 9d. sellers; Modder Bs., £8 5s.—£8 6s.; New Modders, £22 12s. 6d.—£22 17s. 6d.; Randfontein Deeps, 4s. 6d.—4s. 9d.; Rand Klips, 9s. 9d.—9s. 11d.; Rand Selections, 86s.—86s. 6d.; Rooibergs, 9s. 10d. buyers.

	* Fri., 5th.	* Sat., 6th.	* Mon., 8th.	* Tues., 9th.	Wed., 10th.	Thurs., 11th.
African Farms . . .	8 0*	8 0*	8 0*	8 0*	8 0*	8 1*
Apex Mines . . .	7 1*	7 0*	7 0*	7 0*	7 6†	7 1†
Aurora Wests . . .	12 6*	12 6*	12 6*	12 6*	—	12 6*
Bantjes Cons. . .	2 5*	2 5	2 4	2 4*	2 5*	2 5*
Blaauwbosch Diam.	—	90 0†	—	—	—	—
Brakpan Mines . .	106 0*	106 6*	105 0*	107 6*	108 9*	110 0*
Breyten Collieries .	—	8 0*	8 0*	8 0*	8 0*	—
Brick & Potteries .	—	—	—	5 0*	5 0*	5 0*
Bushveld Tins . .	0 5*	0 6*	0 8*	0 8*	0 11†	0 5*
Cinderella Cons. . .	4 0*	4 0*	4 0*	4 0*	—	—
City & Suburbans .	24 0†	23 6*	23 6*	23 6*	24 0†	23 3*
City Deeps . . .	67 0	—	—	66 0	67 0	66 0*
Cloverfield Mines .	8 9*	9 0	8 10*	9 0†	9 0†	8 6*
Clydesdale Cols. .	—	12 0*	—	12 0*	—	—
Concrete Construc. .	5 0†	5 0†	5 0†	4 9†	5 0†	5 0†
Con. Investments . .	—	17 3*	—	18 0†	—	17 3*
Con. Langlaagtes . .	18 0*	18 6*	19 9	19 0*	—	19 0*
Con. Main Reefs . .	14 0*	14 3*	15 0	15 0	15 0*	15 3*
Con. Mines Selec. .	27 0*	27 6	27 0*	27 0*	27 0*	27 0*
Coronation Cols. .	—	—	—	—	—	30 0*
Crown Mines Deb. .	—	—	£98†	£98†	—	—
Daggafontein Mines	25 9	25 6*	25 6	25 6	25 3	25 6
Do. Options . . .	10 6	10 6*	11 0*	10 9*	11 0*	10 6*
Durban Road. Deep	12 6*	12 6*	13 0	12 6*	—	12 6†
East Rand Coals . .	2 0*	2 0*	2 1*	2 1*	2 0*	2 1*
East Rand Deeps . .	1 0†	1 0†	—	1 0†	1 0†	0 11*
E.R. Minings . . .	—	—	—	15 0*	16 0†	16 0†
East Rand Props. .	5 9*	6 3*	6 0*	6 9	6 3*	7 0
East Rand Deb. . .	£63*	£63*	£63*	£63*	£63*	£63*
Eastern Golds . . .	1 1*	1 1*	1 1*	1 1*	1 1*	1 1*
Ferreira Deep . . .	—	—	—	—	—	20 0†
Frank Smith Diam.	3 6*	3 6*	3 6*	3 7	3 7	3 7*
Geduld Props. . .	38 6	38 9*	39 3	39 6*	39 0*	40 0
Geldenhuis Deep . .	22 6†	22 6†	22 6†	22 6†	—	32 6†
Glencairns . . .	—	—	—	1 0*	—	—
Glencoe Cols. . .	—	—	—	—	8 0*	—
Glynn's Lydenburgs	20 0†	20 0†	20 0†	20 0†	20 0†	—
Government Areas .	69 9	70 3*	71 9	71 6	71 6	71 4*
Jupiters . . .	3 10*	4 0	5 0*	5 0*	5 6†	4 9*
Knight Centrals . .	3 0*	3 1*	3 1	3 1*	3 1*	3 1*
Knights Deeps . . .	—	—	—	—	—	10 0†
Lace Props. . .	6 11	6 11	6 11*	7 9	7 11	7 3*
Leeuwpoot Tins . .	13 0†	13 0†	—	—	—	12 0*
Luipaardsvlei Est. .	3 0	—	3 0*	3 3*	3 0*	3 6*
Lydenburg Farms . .	7 3*	7 3	7 1	7 3*	7 6	7 6*
Main Reef Wests . .	3 0*	3 1	3 2	3 0*	3 3*	3 3*
Meyer & Charltons	110 0†	108 9†	108 9†	—	—	108 9†
Middelvlei Est. . .	1 0*	1 0*	1 0*	—	—	—

\*Buyers. †Sellers. ‡Odd lots. §Ex London.

	11 5th.	Sat 6th.	Mon 8th.	Tues 9th.	Wed 10th.	Thurs 11th.
Modder B's . . .	148 9*	—	—	—	—	—
Modder Deep . . .	144 6*	144 6*	144 6*	—	—	—
Modder East . . .	21 9	21 6	21 9	—	—	—
Do. Options 3 yrs. .	8 0	7 11	7 10	7 1	7 10	7 8*
Do. Do. 4 yrs. . .	8 1	8 3	8 1	8 3	8 3	8 2*
Natal Navig. Col. .	—	19 0	—	—	—	—
National Banks . .	—	2 0 0	—	—	2 0 0	21 0*
New Boksburgs . . .	1 2*	—	—	—	—	6 0*
New Eland Diam. . .	25 0*	26 0*	26 0	26 0	26 0	27 0*
New Era Cons. . .	10 9	10 9	10 10	10 10	10 10	10 10
New Geduld Deeps . .	7 0	7 2	7 2	7 3	7 3	7 4
New Heriots . . .	—	—	45 0*	45 0*	45 0*	45 0*
New Kleinfonteins . .	19 6	19 9	19 3	19 3	19 0*	19 0*
New Modderfontein .	110 0*	117 6	112 6*	115 6	116 0*	115 6*
New Rietfontein . .	—	1 0*	1 0*	1 0	1 0*	1 0*
New Unifeds . . .	8 0*	—	8 0*	—	8 0*	—
Nigels . . .	2 0*	2 0*	—	—	2 0*	2 0*
Nourse Mines . . .	18 6	18 6	18 6	18 6	18 6	18 6
Pretoria Cements . .	88 0*	88 0*	88 6	86 0	88 0*	84 0*
Rand Collieries . . .	2 6*	2 6*	—	—	2 6*	2 6*
Rand Klips . . .	9 6*	9 16*	9 16*	9 16*	9 16*	9 11
Rand Nucleus . . .	1 1*	1 1*	1 4*	1 4*	1 4*	1 4*
Rand Select. Corp. .	83 6	83 6*	84 0	83 0*	83 0*	85 0*
Randfontein Deeps . .	4 6*	4 9*	—	4 11	4 6*	—
Randfontein Est. . .	14 0*	14 0*	15 0	14 9	14 6*	15 0*
Rooibergs . . .	10 2	10 6*	10 1	10 3	10 0	9 7
Roodepoort Uniteds .	5 0*	5 6*	—	—	—	—
Rose Deep . . .	18 0*	18 0*	18 0*	18 0*	—	—
Ryan Nigels . . .	—	—	2 6*	—	—	2 6*
Shebas . . .	1 0*	1 0*	1 0*	—	—	1 0*
Simmer Deeps . . .	2 6*	2 9†	2 6*	2 1*	2 9†	—
S.A. Breweries . . .	29 0†	29 0†	29 0†	—	29 0*	—
S.A. Lands . . .	4 10	4 9*	4 10	4 11*	5 1*	5 4
Springs Mines . . .	69 3	69 3	71 3	71 9	70 9	70 6
Sub Nigels . . .	22 7*	22 9	22 9*	22 5*	22 6*	22 6*
Trans. & Del. Bay .	12 6*	12 6*	—	—	—	—
Transvaal Lands . .	13 0*	—	14 6†	—	13 9*	14 6*
Trans. G.M. Est. . .	—	16 6†	15 0*	14 6	15 6†	13 0*
Van Ryn Deeps . . .	67 0	66 6*	67 9	67 3*	67 10*	67 9
Van Ryn Estates . .	35 0†	35 0†	35 0†	35 0†	—	35 0†
Village Deeps . . .	20 0*	20 6*	22 0*	20 0*	20 0*	—
Welgedachts . . .	20 3*	21 0*	20 0*	—	20 0*	21 0*
Western Rand Est. .	1 6*	1 6*	1 6*	1 6*	1 6*	1 6*
Witbank Cols. . .	—	41 0*	11 0	—	—	—
Witwatersrand . . .	—	37 6†	—	—	—	37 6†
Witwatersrand Dps. .	6 6*	7 0*	7 1	7 2*	7 1	7 6*
Wolluters . . .	7 6*	7 9*	7 9	7 9	8 0	7 9*
Zaaiplaats Tins . . .	9 3	9 4*	10 0	9 7	9 0	9 5

Union 5 per cent—5th. £102; 6th. £101 15s.\*; 8th. £101 15s.\*; 9th. £101 15s.\*; 10th. £101 15s.\*; 11th. £101 17s. 6d.\*

\*Buyers. †Sellers. ‡Odd lots. §Ex London.

## Leeuwpoot Tin.

The following is the report of operations at the Leeuwpoot (African Farms) Tin Mines for the quarter ended 30th September:—Stamps, 17 (including 2 Nissen); time run, 87.29 days; tons crushed, 11,625 short tons; concentrates won, 223 long tons; average assay value of concentrates, 60.77 per cent. metallic tin; average price of metallic tin on which the quarter's revenue has been determined is £221 10s. per ton; estimated profit, £6,514 10s. 6d.; net adjustments in respect of previous shipments, £45 14s. 5d.; profit declared for quarter, £6,560 4s. 11d. The sum of £1,126 16s. has been expended for new tin dressing plant, machinery, buildings, shaft sinking, etc. During the quarter a sum of £3,187 10s. for development redemption has been included in working costs.

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## THE WEEK IN THE MINING MATERIAL AND ENGINEERING TRADES.

**Big Drop in Flat and Corrugated Galvanised Iron—Expectation that White Lead will ease on American Shipments—Another Circular—The Motor Spirit Position.**

THE special feature of the week has been a further drop of  $1\frac{1}{2}$ d. per foot in galvanised corrugated iron "to arrive," thus making a total drop of  $3\frac{1}{2}$ d. per foot within three weeks. This substantial decrease in such abnormal times has created much comment as to gauging the future, which becomes more hazy and difficult to forecast from week to week. In regard to galvanised roofing iron one firm alone has 500 tons on the way from America, some of which will no doubt be at the coast when these notes appear. We are getting almost unexpected relief from America, and as that Government has reduced its war risks a quarter on the late one of five guineas, it indicates that the route from New York to the Cape is a fairly safe one. It would appear that our relief is very much wrapped up in the shipping question, rather than the ability of America supplying the material. A pointer to future shipping conditions may be gathered from the American Government declining to supply a Netherlands steamer with coal unless it undertakes to come back to America for more freight. Hence it is anticipated that although the shipping conditions both from America and Britain are easier at the moment, they will unquestionably become more restricted as the war requirements of America grow. Enquiries at the various shipping offices produced poor results, but one important item was gathered, that each voyage of every ship for South Africa is controlled from London or New York, hence anything like a forecast is very much a matter of guesswork.

### THE TREND OF BUSINESS.

Business on the Commercial Exchange is exceptionally quiet and must remain so now the pooling scheme is in thorough working order, as the twelve months' supplies originally referred to by the British Minister of Munitions must gradually be worked down to an average of four months. In connection with the chief buying office, the

following circular has been issued by the Merchants' Standing Committee of the Chamber of Commerce: "We are desired by the Director of the Central Buying Department to state that enquiries are now being issued for the supply of goods from merchants' stocks for delivery over a period of six months, before enquiries are issued for direct importation, as suggested by the Merchants' Standing Committee on imported mining supplies to the Director at a recent meeting. It has come to the notice of the Director that some merchants are in the habit of quoting for the daily mine requisition displayed on the Central Buying Department's board, from stock which has already been placed to the account of this department by reason of the using of orders for the six months' period. The Director desires that all concerned should be informed that goods required by the Central Buying Department or orders for delivery within six months must not be quoted from the mines' daily requisitions." In other words, the old adage applies that you cannot eat your cake and have it too. Therefore one cannot accept a six months' order and draw from that stock for daily requisitions, so that when the six months' order is called up it has been frittered away by the day-to-day requirements.

### MOTOR SPIRITS, PARAFFIN, OILS, ETC.

In consequence of the recent advance in the price of motor spirits, there are rumours that a corner has been arranged by the great importing houses. After carefully investigating the position, it seems that when the "Colonial Empire," a sailing vessel loaded with motor spirits, paraffin and oils from America, came to grief on a rock off the South African coast, the more far-seeing of the public commenced

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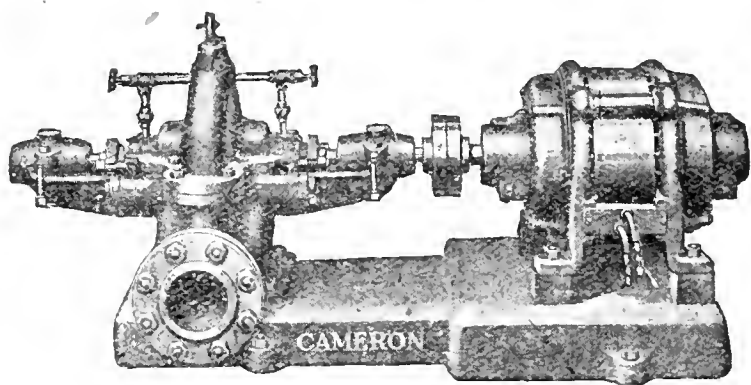
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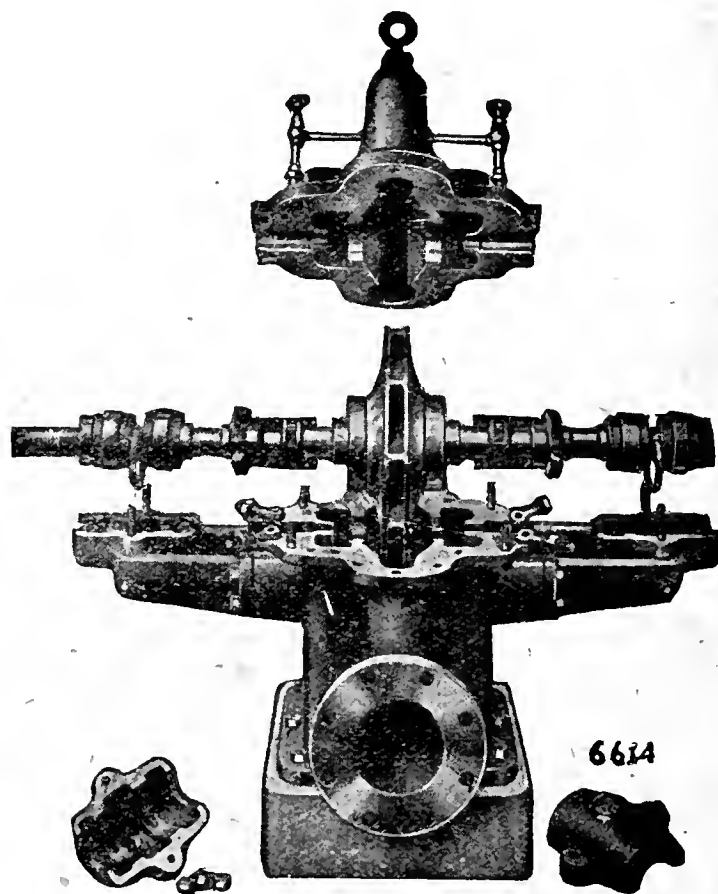
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to quietly purchase for their future consumption. This impetus, subsequently accelerated by an advance in the price, created somewhat of a scare. Mention of one or two authenticated instances will illustrate the matter. Soon after the loss of the specially chartered oil ship in question a speculator went to an official of one of the companies and offered him a bonus of 5s. per case to obtain 100 cases of motor spirit for cash, which was smartly declined, and again one of the regular customers of a company who occasionally purchased a case or so, suddenly woke up to the fact that he wanted 100 cases. From outside sources it was ascertained that the holders of motor spirits are not so generous now over the credit conditions; for example, ten cases at one time only represented about £10 in value, whereas now they mean £17 10s., and when the order is suddenly jumped to 100 cases £175 is involved, and the credit conditions when the account soars to such an amount require to be rearranged. Some friction has been caused in consequence, both for the past accounts and for the future. As regards supplies, it must be borne in mind that the Government have been very excellent customers for motor spirits for German East, etc. However, there are ample supplies in Johannesburg to go round for the immediate future, as the several companies are supplying and are prepared to supply their regular customers on the basis of the previous average consumption. There is no positive information on the subject of obtaining future supplies, but from hints thrown out it is more than likely that another ship or ships may soon be coming from New York. In the meantime the taxi drivers are being badly hit over the present high price of 35s. per case, so much so that there is some responsible talk about calling a meeting of drivers, to which the public will be invited.

#### THE SUPPLY OF PIPES.

According to one cable received here on Wednesday from America, giving a quotation for 3-inch and 6-inch piping, the condition inserted was that the mill could not guarantee shipment under 75 weeks. The price did not transpire, but it was understood to be higher than the present values. A cable also was received from England, which said that large pipes cannot be exported and no quotation could be given for the 6-inch variety, as it is almost impossible to obtain the necessary steel for the manufacture.

#### ENGINEERING SHOPS AND FOUNDRIES.

There is plenty of work—often too much—owing to the breakages on the mines, which are evidently getting more common on account of the patched-up renewals now extending over the past three years of the war. Foundry men are very scarce and in a lesser degree engineering mechanics. One manager remarked that there was a great scarcity of scrap iron, therefore the price had gone up from £3 10s. before the war to the current rate of £6 10s. per ton. Some twelve months ago the mines in giving out orders undertook to supply the necessary scrap iron, but lately this has been

almost discontinued, as many of the mines have not sold for their own use. Although some of the foundries get ton supplies of pig-iron, none are over plentifully supplied. The question of pig-iron has become of more importance, as by smelting and re-smelting of old scrap, the output deteriorates and becomes more hard and brittle, therefore all parts requiring extra strength must have more pig-iron. It is said that pig-iron may soon be made either at Pretoria or at Vereeniging, as undoubtedly the requisite raw material is in the country, as excellent samples from the Ermelo district were recently brought into Johannesburg, and up to a certain point have been tested, with satisfactory results.

#### OILS AND COLOURS, WHITE LEAD, ETC.

An acute position is developing in linseed oil, as the distributing firm is not selling any, excepting in small retail lots, and other houses are in much the same state. The price has risen from 50s. to 52s. 6d. per cwt., but it is not altogether the price but the difficulty of obtaining supplies. The orders last month from the railway bore the local market considerably both for linseed oil and white lead. It is likely, however, the white lead position may ease shortly, as it is said to be certain that decent consignments are on the way from America, which should relieve things immensely. According to a member of the Commercial Exchange, this information is seemingly confirmed, as the quotation was down 5s. per 100 lbs. on Thursday. These American shipments quickly affect the local market, throughout the whole gamut of supplies, which illustrates the fact that things are very sensitive on the present high values. There is a big demand for paints, of which there are fair quantities of the tinned descriptions. The beautiful weather has given an impetus to the painting and colouring of the outside of houses, certainly in the leading thoroughfares throughout Johannesburg and the suburbs, notwithstanding the high price of materials and brushes.

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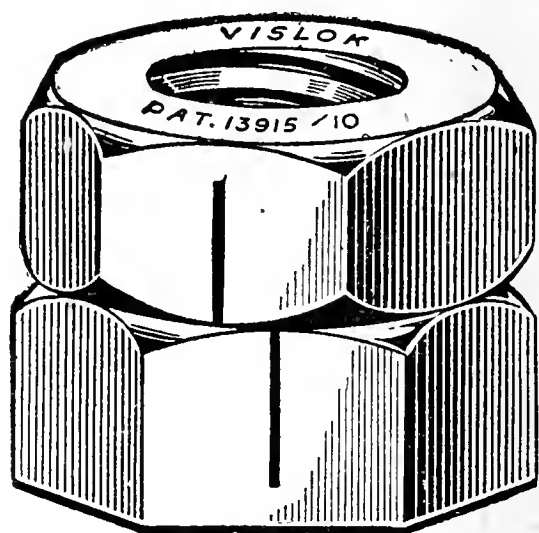


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## BUILDING AND PLUMBING MATERIALS.

The sensation of the week has been the sudden drop in flat and galvanised iron, as the difference between the last purchase of a ton, as compared with six weeks ago, is £35. The actual price for this transaction is unobtainable, nevertheless the statement can be relied upon. The reason is that consignments have already been received at the coast from America, which has created a nervous feeling amongst holders at the coast rather than in Johannesburg, where the market has got into a very lean state. Ordinary deals remain at the same price, but clear pine and poplar have advanced owing to the shortage of arrivals. With the high prices, one often felt that the building trade would rather recede than advance, but undoubtedly the owners of stands with the money available have taken the bit between their teeth and going ahead persistently in the erection of private houses, as well as shop improvements and additions, evidently anticipating that not only will business keep up, but, what is of equal importance, improve.

## REVISED PRICE LIST.

**BUILDING MATERIALS.**—Timber: Deals, Baltic, 9 x 3, 1s. 3d. to 1s. 4½d.; flooring, 4½ x 7 and 6 x 7, 8½d. to 8½d. per square foot; flooring, 4½ x 1½, 9½d.; and 6 x 1½, 9½d.; ceilings, 6 x ½, 4½d. to 1½d. per square foot; pitch pine, 8s. 6d. per cubic foot; Oregon, 6s. 6d. per cubic foot; clear pine, ½ in. x 12 in., 1s. 1d. per foot; 1in. x 12in., 1s. 3d.; teak, 16s. 6d. to 17s. 6d. cubic foot; shelving, jarrah, 12s. 6d. cub. ft.; poplar, 1in. x 12in., 1s. 3d.; scantling, 1s. 3d. to 1s. 4d. per ft.; beaver boards, 5d.; galvanised iron, 24-gauge, 6ft. to 10ft., 2s.; 11ft., 2s. 1d.; 12ft., 2s. 2d.; 26-gauge, 6ft. to 8ft., 1s. 10d.; 9ft. and 10ft., 1s. 10d.; flat galvanised, 24-gauge and 26-gauge, 125s. per 100 lbs.; floor brads, 45s.; ceiling, 47s. 6d.; wire nails, 47s. 6d. to 55s. per 100lb.; locks, rim, 66s.; mortice, 70s. per dozen; steel ceilings, 75s. to 80s.; roofing material, 1 ply, 35s.; 2 ply, 45s.; and 3-ply, 47s. 6d. per roll.

Bricks, cement, lime, etc.: Pretoria Portland Cement, 9s. 3d. per bag; 8s. 3d. truck loads; lime, white, unslaked, 7s.; truck loads, 6s.; slaked, do., 5s.; blue 3s. 6d.; plaster lime, 4s. 6d.; bricks, stock delivered, 50s. to 52s. 6d.; wire cuts, 55s. to 70s.; pressed, 70s. to 80s. per 1,000; road transport difficult to obtain; salt and white glazed bricks, £27 10s. per 1,000; roofing tiles, £15 to £27½ per 1,000; glazed tiles, 10s. 6d. to 17s. 6d. per yard; paving cement tiles, 8s. 6d. per yard laid; reinforced concrete columns, 6 ft. plain, 22s. 6d.; fluted, 24s.; fireclay bricks, £7½ to £9½, at kiln, per 1,000; clay chimney pots, 36s. to 70s., according to height, 12 in. to 18 in., per doz.; fire clay, 37s. 6d. per ton on rail.

Oils, paints, lead, oxide, glass: Linseed, raw and boiled, 50s. to 52s. 6d. per five gals.; white lead, 1s. 3d. per lb. (big lots not quoted); turpentine, 57s. 6d. 2/4 1-5 gals.; 10/1 tins, 5/6 Imperial, 63s. 6d.; oxide in oil, 36s. per 100lb.; dry oxide, 22s. 6d. to 27s. 6d.; linseed oil putty, all at 6d. lb.; paints in tins, 1s. to 1s. 3d. per lb.; British plateglass, ½ in., 4s. 6d. to 5s.; do, mirror, 5s. 6d.; window, 16oz., 1s. to 1s. 3d. per foot.

Grease, imported, A.F. axle, £28 to £32; local, £24 to £26 per ton; tallow (local), 5½d. per lb.; White Rose paraffin, 18s. 4d. 2/4; Laurel paraffin, 18s. 1d.; petrol, 33s. 6d. to 36s. 6d., 2/4 I.M.P.; motor oil, 6s. 6d. to 7s. 6d. per gallon; engine lubricating oils, 27s. to 40s. per case; cylinder, 26s. 6d. to 42s. 6d.

Chemicals: Mercury, £55 to £60 per 75lb. bottle last sale, but now no definite price; bichlorate potash, 5s. 6d. lb.; chlorate, 4s. 6d. per lb.; permanganate, 14s. lb.; alum, 6d. lb.; carbolic acid, 7s. 6d. lb.; borax, 92s. 6d. 100 lbs.; cyanide soda, 1s. 5d. lb.; hypo, 9d. lb.; acetate lead, 77s. 6d. 100 lbs.; litharge (assay), 72s. 6d., (commercial) 58s. 6d. 100 lb.; zinc sheets and blocks, 1s. 9d. lb.; plumbago crucibles, 5d. per number.

Electrical goods: Lamps, high volts, British, Holland, and American, 30s. wholesale, and 54s. dozen retail; carbon lamps, 12s. 6d. dozen; pure rubber flex, 6d. to 8d. per yard; 3/20 coils of wire, 33s.

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Iron, imported, ½ in. and ¾ in. round, 60s. to 65s. per 100 lb.; ½ in. round, 60s. to 65s. 100lb.; ¾ in. round, 37s. 6d. to 40s. 100lb.; 1in. upwards, round, 30s. to 32s. 6d. per 100lb.; square iron, 30s. per 100lb.; flat iron, small shoeing sizes, 42s. to 45s.; flat, average width and thickness, 28s. 6d. to 30s.; round iron, local, ¾ in. upwards, 25s. 6d. per 100lb.; square iron, local, ¾ in. upwards, 25s. 6d. per 100lb.; flat iron, average widths and thickness, 25s. 6d.; mild steel bar, 5½d. per lb.; drill, 1s. per lb.; steel plates, 60s. to 67s. 6d.; some sizes unobtainable; hexagon and cuphead bolts, ½ in. diameter, 2s. per lb.; 5-16in. diameter, 1s. 9d. per lb.; ¾ in. diameter up to 3in. long, 1s. 3d. lb.; ¾ in. dia., 11d., 3½ in. and up long, 1s. lb.; ¾ in. dia. up to 2½ in. long, 70s. 100lb.; ½ in. dia. and 2½ in. up long, 70s. per 100lb.; ¾ in. diameter up to 2½ in. long, 57s. 6d. per 100lb.; ¾ in. dia., 2½ in. and up long, 55s. per 100lb.; ¾ in. diameter, 2½ in. and up long, 50s. 100 lbs.; ¾ in. and 1in. dia., same price as ¾ in. diameter; nuts, ¾ in., 1s. 3d. per lb.; ½ in., 72s. 6d.; ¾ in. to 1¼ in., 70s.; 1½ in. and 1½ in., 75s.; 1½ in. to 1¾ in., 75s.; 2in. up, 85s.; washers, all sizes, 45s.; rivets, 3-16in., 1s. 6d. lb.; ½ in., 5-16in., 1s. 3d. lb.; 7-16in., ¾ in., 1s. lb.; ¾ in., 10½d. lb.; ¾ in., 55s.; ¾ in. up, 52s. 6d. 100 lb.; shoes and dies, 32s. 6d. to 35s., 100lb.; rails, £25 per ton; picks, 4lb., 40s. per dozen; shovels, 55s. to 60s. per dozen; drill hammers, 5½d. to 6d. per lb.; hammer handles (best American), 14in., 3s. 6d.; 24in., 7s.; 30in., 9s. 6d.; 36in., 13s. per dozen; metal, anti friction, 1s. per lb.

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## September Company Registrations.

### LIST OF COMPANIES, SEPTEMBER, 1917.

- 5283 The Skilpat Tin Mines, Ltd., 1 and 2, Old Exchange Buildings, Commissioner Street, Johannesburg; capital, £5,000.
- 5284 The Harvester Diamond Mining Co., Ltd., 32, Beckett's Buildings, President Street, Johannesburg; capital, £1,500.
- 5285 Queen's Buildings, Ltd., 280, Vermeulen Street, Pretoria; capital, £1,500.
- 5286 Northern Houses, Ltd., Carl Street, Pretoria West, Pretoria; capital, £100.
- 5287 Wellington Bacon and Provisions Factory, Ltd., Barsdorf Buildings; capital, £25,000.
- 5288 Patel and Patel, Ltd., Brakfontein No. 278, P.O. Zwartkops, District Rustenburg; capital, £500.
- 5289 Thomas Andrews and Sons, Ltd., The Maid of the Mist Mine, Louws Creek, District Barberton; capital, £5,000.
- 5290 R. L. Esson and Co., Ltd., Steytler's Buildings, Loveday Street, Johannesburg; capital, £12,000.
- 5291 Hoosen, Ltd., Church Street, Middelburg; capital, £1,500.
- 5292 Sheffield Electro-Plating and Enamelling Works, Ltd., 102, President Street, Johannesburg; capital, £2,500.
- 5293 Premier Tobacco Agency, Ltd., 13, Yeo Street, Yeoville, Johannesburg; capital, £1,000.
- 5294 African Guarantee Boot Manufacturers, Ltd., 59, Sherwell Street, Doornfontein, Johannesburg; capital, £2,500.
- 5295 Modern Dwellings, Ltd., 14, Bureau Street, Pretoria; capital, £2,000.
- 5296 Cereal Products, Ltd., 34 and 35, National Mutual Buildings, corner Market and Rissik Streets, Johannesburg; capital, £1,000.
- 5297 The Underwriters, Ltd., 34 and 35, National Mutual Buildings, corner Market and Rissik Streets, Johannesburg; capital, £2,000.
- 5298 Verad Trading Co., Ltd., 42, President Street, Johannesburg; capital, £2,000.
- 5300 The Glendower Salt Co., Ltd., 207, Consolidated Buildings, Johannesburg; capital, £4,500.
- 5301 Motan, Ltd., 2, Kerk Street, Johannesburg; capital, £500.
- 5302 Hassim, Ltd., 12, Rosenberg Arcade, Market Street, Johannesburg; capital, £2,500.
- 5304 Selati Minerals, Ltd., 51, Sauer's Buildings, Loveday Street, Johannesburg; capital, £4,000.
- 5305 The Pretoria Iron Mines, Ltd., 264, Vermeulen Street, Pretoria; capital, £25,000.
- 5306 Wineberg, Ltd., 94a, Eloff Street, Johannesburg; capital, £2,000.
- 5307 White Leads (South Africa), Ltd., 335, Frederick Street, Pretoria; capital, £2,000.
- 5308 President Properties, Ltd., 37, Simmonds Street, Johannesburg; capital, £9,000.
- 5309 Anglo-American Corporation of South Africa, Ltd., 2, National Bank Buildings, corner Simmonds and Market Streets, Johannesburg; capital, £1,000,000.

- 5310 Carlehuw Collieries, Ltd., Cullinan Buildings, Main Street, Johannesburg; capital, £30,000.
- 5311 Riverton Diamond Syndicate, Ltd., 57, 58, and 59, Exploration Buildings, Commissioner Street, Johannesburg; capital, £25,000.
- 5313 Maritzburg Motor Marts, Ltd., Corner Rissik and Marshall Streets, Johannesburg; capital, £1,000.
- 5314 Hampton's, Ltd., 123a, Fox Street, Johannesburg; capital, £1,200.
- 5315 Natal Plantations, Ltd., 2, Estate Buildings, Fox Street, Johannesburg; capital, £3,000.

### FOREIGN COMPANIES.

- 5303 Legate's Competitions, Ltd., c/o John Meikle Legate, Dowell's Buildings, Loveday Street, Johannesburg; capital, £25,000.
- 5312 United States Steel Products Co., c/o A. E. Newson, Consolidated Building, corner Fox and Harrison Streets, Johannesburg; capital, \$1,000,000.

### ALTERATIONS AND ADDITIONS TO FOREIGN COMPANIES.

- 4646 Southern Van Ryn Reef Gold Mining Co., Ltd., Johannesburg.

### SPECIAL AND EXTRAORDINARY RESOLUTIONS.

- 1434 Anglo-French (Transvaal) Navigation Coal Estates, Ltd., Johannesburg; new articles.
- 4758 Rand Tea Rooms, Ltd., Johannesburg; bond.
- 4917 The Smallholdings Co., Ltd., Johannesburg; confirmation of sale.
- 5071 Victoria General Investment Co., Ltd., Johannesburg; increase of capital.
- 3209 Land and Trading Co., Ltd., Pretoria; alteration of articles.
- 4917 The Smallholdings Co., Ltd., Johannesburg; director.
- 4911 African Iron and Steel Products, Ltd., Johannesburg; alteration of articles.

### NOTICES OF INCREASE AND DECREASE OF CAPITAL.

- 5071 Victoria General Investment Co., Ltd., Johannesburg; increased from £425 to £825.
- 4434 White Limes, Ltd., Johannesburg; increased from £6,500 to £10,500.
- 5178 The City Estate Co., Ltd., Johannesburg; reduced from £35,000 to £10,650.

### COMPANIES PLACED IN LIQUIDATION.

- 5242 Phoenix Furnishing Co., Ltd., Johannesburg; capital, £1,500.
- 3890 Phœnician (Rhodesia) Co., Ltd., Johannesburg; capital, £1,890.
- 3588 Griffin Gold Mining Co., Ltd., Pretoria; capital, £18,500.
- 3566 The Rhodesian Mines Selection Co., Ltd., Johannesburg; capital, £100,000.
- 1933 Victoria Gold Mines, Ltd., Johannesburg; capital, £12,000. (By Order of Court.)

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## The Week's Meetings.

### SIMMER AND JACK.

The adjourned 19th ordinary general meeting of shareholders in the Simmer and Jack Proprietary Mines, Ltd., was held on October 5th in the board-room, Consolidated Gold Fields, Ltd.

Mr. D. Christopherson presided, and others present were:—Messrs. D. W. Rossiter, W. S. Smits, J. E. Kent, R. O. Stone, A. S. Ball, C. H. Barklay, A. E. C. Hocking, and A. C. Grant (secretary).

The Chairman, in moving the adoption of the report and accounts, said:—It will be seen from the report and accounts which are before you that the declared results of operations for the twelve months ended 30th June last as revealed by the revenue and expenditure account were as follows:—

Revenue from gold . . . . .	£819,079
Expenditure, including re-	
newals and replacements . . . .	591,892
Declared profit on working . . .	227,187

the latter item being less than for the previous year by £59,997. The factors mainly responsible for this falling off in the profits were: decreased quantity of ore milled by 32,600 tons due entirely to shortage of native labour; also lower declared yield of 6.571d., and higher working costs by 8.765d., so that the declared working profit was less by 1s. 3.136d. per ton milled. It should be added, however, that during the year under review 2,660 ounces of fine gold, value £11,083 were added to the reserve gold account, whereas in the previous year 7,210 ounces of reserve gold, value £30,255 were declared, therefore the net actual decrease in profits was only £18,658, which, in view of all the adverse circumstances is not so serious a drop as might otherwise have been the case. To the working profit of £227,187 carried down we have to add £24,790 in respect of sundry revenue, thus making a total of £251,977. From this sum, however, various items, in all £44,465, had to be deducted on account of payments to Miners' Phthisis Compensation Fund, expenditure due to war, income tax London, and provision for normal and dividend taxes South Africa, also sundry amounts written off. Consequently the figure carried to appropriation account was £207,512, which, together with the balance of £92,233 as at 30th June, 1916, made a total of £299,745 available, out of which two dividends, equal to 7½ per cent. in all, absorbing £255,000 were declared, and after providing for a net amount of £1,626 to reserve for additions to and renewals of machinery and plant, there remained a sum of £73,119 carried to the balance sheet.

### The Balance Sheet.

Turning now to the balance sheet. On the debit side it will be noted that the item "Amounts appropriated for Capital Expenditure" was increased as compared with the previous year by £50,844, this amount (in order to meet the part payment to Simmer Deep for claims—a matter dealt with later) being transferred from the additions and renewals fund, which fund has been correspondingly reduced. Reserve gold account is shown at £16,667 as against £5,583. As the actual profits were at times during the past year considered abnormal, due in some measure to the success of sand-filling underground, enabling the management to remove certain standing pillars, the ore contained in which was of high value, it was decided to build up the reserve gold account, whenever opportunity offered, with a view to the earlier liquidation of the debt

to the Simmer Deep Company if thought advisable and thereby relieve future profits. As a matter of fact the gold in reserve at 30th September, 1917, was 6,550 fine ounces, value £27,292, as against nil at 31st August, 1917. "Sundry Creditors" stand at £250,091 as against £189,713, an increase of £60,378. There was a decrease in the provision for Union taxation and a slight increase on open accounts in respect of wages, stores, and sundries, but the balance due to Simmer Deep in respect of the claims taken over, viz.,

£53,309 (including allowance for interest) more than accounts for the increase. On the credit side of the balance sheet it will be seen that "Mynpachts, claim areas, water-rights and freehold" figured at £2,487,949. This, however, was reduced by £3,300, that being the proportionate amount which accrued to your company out of the net sum realised by the sale of freehold property in the South Germiston Extension to the Germiston Municipality for industrial purposes. We have, however, added £125,550, being the amount payable to the Simmer Deep Company (including transfer duty), for the right acquired during the year under review from that company to mine some 40.6 of their claims. Thus the total figure in respect of "mynpachts, claim areas, water-rights and freehold" now stands at £2,610,199, as against £2,487,949 at the end of the previous year. Stores and material on hand figure at £88,189, as against £66,633 an increase of £21,556, which is due to the higher prices we have to pay for such commodities owing to war conditions and carrying larger stocks than would otherwise have been the case. The pooling arrangements recently adopted by the mining industry as a whole should, however, have a tendency gradually to reduce the large sums of money now locked up in stores. Investments stand at £12,428, as against £17,736, or a decrease of £5,308, due mainly to the fact that during the past year your holding of ordinary shares of the Victoria Falls and Transvaal Power Company were sold, and also to certain necessary adjustments having taken place in the company's interests in the Rand Mutual Assurance Company, Ltd., a 1 in the Native Recruiting Corporation, Ltd. In the previous year's balance sheet an item of £35,329 was shown under the heading of "investment of reserve fund for additions to and renewals of machinery and plant," representing an investment in 40,409 preference shares of the Victoria Falls and Transvaal Power Company, Ltd. During the year all these shares with the exception of four were disposed of, consequently this item has now disappeared from the balance sheet, and the four shares included under the ordinary heading of investments. The other items in the balance sheet do not call for any special comment. It will, however, be of passing interest to state that the liquid assets as shown in the balance sheet amount to £335,117, whereas the cash liabilities as shown on the other side of the balance sheet amount to £312,029, so that the liquid assets at the 30th June were £23,088 more than our liabilities.

### The Outstanding Feature.

As you will have gathered from my previous remarks the outstanding feature in connection with your company during the past year was the acquisition of the right obtained from the Simmer Deep to mine some 40 odd claims situated on the north-eastern boundary of that company, for a consideration of £124,000, half of which (£62,000) was paid on the signing of the agreement at the end of January

last, the balance of £62,000 being an equal amount in labour to be worked at the rate of 7.10p. cost per ton on the balance sheet, and from time to time your company having the option to pay off the balance of any part thereof at any time before the expiration of the five years. As will have been seen from the report issued to shareholders in January, 1917, the valuations placed on the claims, contents of the area of approximately 1,160,000 milling tons, being an average recovery value of 1.771d. on the main reef and main reef leader, and to this could be added a further 500,000 milling tons which may be recovered from undeveloped south reef and from certain other seams, the estimated average recovery value of which was stated to be 1d.10s. About 100 acres of this area is developed for stopping. Mr. E. J. Way, M.L.C., M.L.M.B., F.I.C. (Eng.), whose report was chairman stated:—(a) The additional ground will prolong the life of the mine by at least two years; (b) it will enable the company to maintain for a longer period a yearly tonnage commensurate with the requirements of the reduction plant and prolong considerably the period for which the company will be able to keep the reduction plant working with profitable results; (c) it will nearly equalise the life of the existing deep level shaft sections; (d) the extra tonnage will prevent for a longer period an increase in working costs due to diminution of operations; (e) it will enable the company to work ore of a general average grade which it would not be able to work profitably without these claims. Mr. Way finally concluded his report by stating it as his opinion that the payment of £124,000 for the 40 odd claims in question was fair and advantageous to both companies. The essence of the proposal was, as Mr. C. D. Leslie stated, that this company having the spare plant and equipment as well as other facilities for exhausting the area without deterring ore from other sources, could thereby realise considerably greater profit from this ground than would accrue if it were worked by the Simmer Deep. It will be observed from the acting manager's report that it has been necessary to push on as fast as possible with the sinking of No. 2 auxiliary deep level incline shaft in order to mine ore in the Simmer Deep claims section at an early date. As a matter of fact we have holed into these claims at No. 1 shaft and will very shortly hole into this area at No. 2 shaft. The working costs for the past financial year, viz., 15s. 5.610d. per ton with a tonnage of 765,300 compares with 12s. 4.335d. per ton with a tonnage of 769,600 for the corresponding pre-war period in 1914, or an increase of 3s. 1.284d. per ton.

### Supplies and Labour.

As evidence of the considerably higher cost of mine supplies, due to the war, I would point out that for the twelve months ended 30th June, 1917, as compared with the year ended 30th June, 1914, the total stores charged out to working costs represented an increase of about 55 per cent., viz., 1s. 10d. per ton crushed, equal on the tonnage milled of 765,300, to £70,150 per annum. This and other disabilities due to the war were accentuated during the year owing to a decrease of 519 boys in the native labour force, in fact during the last half of the year mining operations were considerably hampered by reason of the shortage of native labour. Moreover, there was an increased expenditure of £12,741 for the support of mine workings. The position of our native labour

force at the end of September, 1917, was that we had 3,301 natives as compared with 3,833 natives at 30th June, 1916, being a decrease of 532 natives. You will see from the report for the past year of Mr. C. D. Leslie, your consulting engineer, that only a small amount of development remains to be done in the Simmer and Jack area proper, but that development work will be continued in the claims taken over from the Simmer Deep, the addition of which adds materially to the prospects of maintaining during the active life of the mine a tonnage output approaching that which can be most economically treated at the reduction works. As the Simmer and Jack mine itself is becoming exhausted, development work is obviously being pushed on as rapidly as possible in order to provide the necessary working faces to keep the plant employed, and only the bottom level now remains to be connected. Therefore, the acquisition of the additional ground which has been effected can be readily appreciated. Turning to the position of the ore reserves: In the Simmer and Jack mine proper and in the 40.6 Simmer Deep claims the fully developed ore reserve at 30th June, 1917, after eliminating 122,000 tons of low grade ore which must be classed as unpayable under present conditions of working, is estimated at 1,862,000 mine tons of an average value of 5.3 dwts., which compares with 1,935,000 tons and 5.2 dwts. respectively at 30th June, 1916; while in addition, the partially developed ore is estimated at 491,000 mine tons of an indicated value of 4.78 dwts., as against 215,000 tons and 4.4 dwts. respectively at the end of the previous year. This reserve does not make allowance for a large tonnage of reclamation ore, the extent and value of which cannot be estimated on account of insufficient data.

#### Miners' Training Schools.

Mr. Greathead, the acting manager, in his report refers again to the fact that the mine is still suffering from the inefficiency of the white labour force available, as a considerable number of our best workers have joined the military forces. He expresses the hope that the new scheme of training white youths at the Government Miners' Training Schools will remedy this defect, and adds that the few men we have had from the Wolhuter Training School have been very satisfactory. This, I hope, may be taken as an encouraging indication as to what the value of newly-formed miners' training schools will be to the industry, and to the country generally, as at present practically all the apprentices are drawn from South Africa itself. As regards the prospects for the current year, as far as one can judge to-day, provided labour is available, there should be an improvement in profits as compared with the year we have just been reviewing. It is quite likely that as further pillars containing ore of good value are removed the recovery grade and profits will, over varying periods, be above normal, and, as I stated before, advantage will probably then be taken towards liquidating the balance due for the purchase of the 40 odd claims, and thus reduce the liability to be met out of profits during the later stages of the life of the mine. It will be seen from the acting manager's report that the total number of our white employees who have proceeded to the front is 174, and that 99 of these men are still on active service. Since addressing you last year I have to report with much regret the following further casualties among our employees:—

Killed or died on active service:—Lieut. G. E. Rawlinson (previously reported as wounded and a prisoner, now notified died of wounds in Germany), Lieut. O. G. Fox, Pte. G. T. Newton, Pte. G. J. Dashwood, Pte. D. G. F. Ross, Pte. J. S. Clark (previously wounded).

Wounded:—Acting Sergt.-Major J. Kennedy, Pte. G. Naylor, Pte. W. T. Oxenham, Lance-Corpl. John Hawthorne, Lance-Corpl. P. W. Hunter (wounded twice), Pte. A. H. Peek, Pte. A. A. E. Backmann, Pte.

E. C. Thompson, Pte. John C. G. Howard, Pte. G. J. A. Cleverley (wounded three times), Pte. William Clark (wounded twice). To the families and relatives of those men who have given their lives we extend our sincere sympathy, and in regard to the men who have been wounded we trust that they will have an early and complete recovery. It is with pleasure that I record that two of our employees have had honours bestowed upon them while on active service, viz.:—Captain R. H. Crichton, Military Cross; Pte. Sidney Tucker, Military Medal. Furthermore, congratulations are extended to Lieut. Colonel F. Leslie Brown, D.S.O., one of your directors (with the Mechanical Transport Service in East Africa), who recently received the D.S.O. in recognition of valuable services rendered. I would like to take this opportunity of specially recording our best thanks to Mr. O. P. Powell, your late manager, for the excellent work he rendered throughout the many years he was manager of your property. During the year Mr. O. P. Powell was appointed superintending engineer, in place of Mr. C. D. Leslie, who became consulting engineer, while Mr. C. H. Greathead was appointed acting manager. In conclusion, I desire to express appreciation to these gentlemen, and also to the mine staff, who have carried out their duties so efficiently during another trying period.

The report and accounts were adopted.

The retiring directors (Mr. D. Christopher-son and Colonel F. Leslie Brown, D.S.O.) were re-elected, and Messrs. Douglas, Low and Co. and Mr. T. A. White were re-appointed auditors.

#### UNION MICA MINES.

The Chairman, Mr. W. A. Doherty, at the statutory meeting of the Union Mica Mines, Ltd., reported that he had recently visited the mines and was very pleased with the amount of work done. The Mica Mine was some twenty-five miles from the rail-head, and the whole of the road had to be made, the last nine miles being through bush country and the trees had first to be cut down. A large camp had been made and a native compound, the latter consisting of nineteen huts and the former of one large hut with three rooms and a verandah enclosed with mosquito netting, four other huts, two kraals and a kitchen and a store house for mica, containing bins for various classes of mica and a hut at the station for storing mica pending the arrival of trucks. The mica had not been worked since the formation of the company until August, and the results since had been eminently satisfactory, the mica improving in quality and size of sheet, as development proceeded. Mica to the value of £300 had been sold locally, and paid for, and several tons of mica were on hand in dressed and undressed form. Inquiries had been received from England, France, America and Japan, and it was confidently expected that a big export business would be done in a few months time. Small consignments were going forward to England and America. A further 100 claims had been pegged for the Company, which appear to be of a similar nature to the present mine. It was not proposed to open up these at present, as the mica now being worked was sufficient to supply all demands. The shareholders were to be congratulated on having a most valuable proposition, and thanks were due to Mr. Davidson, the manager, for the energetic and economical way he had developed the property. The Company has nine cutting machines and it was proposed to build a further big shed for splitting, dressing and cutting the mica, so that the work could be carried on in rainy weather.

Dr. Sanders, in his report on several samples from the mine, states: "The contents of the samples submitted compare most favourably with the best Indian mica. Your Company's mica is, therefore, most adaptable for use in dynamo-electric machinery, for which it is largely used."

#### SWAZILAND TIN, LTD.

Mr. H. C. Boyd presided over the meeting of the Swaziland Tin, Ltd., on Oct. 11, when the total share capital represented was 43,149 out of a total issued capital of 82,000 shares.

#### The Chairman's Speech.

In moving the adoption of the directors' report and balance sheet, Mr. Boyd said:—The working profit for the twelve months ended 30th June last, with which the reports and accounts before you deal, was £20,348, or some £2,070 better than that of the previous year. Virtually the same amount of ground was treated, 915,536 cubic yards, with a fractionally decreased average yield of .71 lb. metallic tin per yard. The total costs were greater at 7.4d. per yard, but the profit increased to 5.3d., as the average metal price realised was over £193 per ton as against £166 previously. After providing for the expenses of the special prospecting, which was on the ground of a neighbouring concession offered on attractive terms, and increased base metal royalty, and after taking credit for various items of revenue, including the final realisation of the Zaaiplaats interest, a net profit of £20,093 remained for the year. The balance brought forward from the previous accounts being considerable two dividends of 10 per cent. and 15 per cent. respectively were declared, absorbing £20,500, while the net debit to capital account was £2,939, the main expenditure being on equipment in connection with the Foy's Creek and Manzane areas, leaving a credit balance of £16,267 to be carried forward.

The consulting engineer's and manager's reports deal fully with the operations of the past year. The details regarding the employment of the gravel syphon installed on Mr. Garrard's advice have doubtless been read with interest. It is again a gratifying feature that so much payable ground could be cut beyond the limits of the proved areas. As is stated no fresh drilling was undertaken, the drills being employed on the outside work already referred to, but the reserve position remains satisfactory, and drilling will be resumed this year. During the current financial year the June output has been realised at about £500 more than the figure at which credit was taken for it in the accounts before you, and during July and August (September figures not yet being available) 67½ tons of concentrates were produced realising on a conservative estimate a profit (including £880 in respect of previous shipments) of £3,544, as compared with just over 58 tons and £1,674 profit for the same months in 1916. I would remind you that the results of these first months of the financial year are generally relatively poor, and we are not yet getting the full benefit from the new work on Foy's and Manzane, as the poorer ground there has to be treated first. The "cut" for last July, August and September was 254,700 cubic yards, against about 203,000 cubic yards during these months in 1916, a very material improvement.

#### Transport Difficulties.

Shipping and transport difficulties tend to increase. The growing scarcity of ships is beyond our control, but the question of transport from the works has been satisfactorily settled by the securing of our own plant at a cost of £2,250, and no further trouble in this respect need be anticipated. The special prospecting has continued but with inconclusive results, and will probably be stopped very shortly.

As you are doubtless aware, tin concentrates are now being smelted locally, and

in view of the increasing realisation charges we are carefully considering the advisability of dealing similarly with our concentrate. Should it be decided to do so we shall be in a favourable position in regard to the disposal of the metal we shall produce owing to its purity compared with that smelted from lode tin ore. Metal from purely alluvial concentrate such as ours always commands the highest price owing to its exceptional freedom from deleterious ingredients which, to take the case of arsenic, for instance, are harmful when present even in minute quantity. When we consider that less than a tenth of 1 per cent. of this impurity spoils the texture of the metal it is easy to understand how an apparently high grade product containing over 99 per cent. tin may still not be of good quality. Of our relatively small staff of Europeans, a considerable proportion is on active service, and we have to record with deep regret that Mr. M. O. Bennett has been killed, while Messrs. Murray and Pote have been wounded. Our respectful sympathy has been conveyed to their relatives. In conclusion, the board desires to record its appreciation of the valuable services which Mr. Garrard, the consulting engineer, Mr. Kelly, the manager, and the staff generally continue to render us.

I now beg to move that the directors' report and the accounts for the year ended 30th June last be received and adopted.

The motion was agreed to.

Messrs. H. C. Boyd and E. Oats were re-elected directors, and Messrs. Alex. Aiken and Carter reappointed auditors.

## UNION CORUNDUM MINES.

The Chairman, Mr. W. A. Doherty, at the statutory meeting of the Union Corundum Mines, Ltd., reported that he had visited the mines recently and had spent nearly a fortnight there visiting the various claims. He was very much struck with the work done for the small cost. Over 30 miles of roads had been made for the Corundum and Mica Mines conjointly, and for about half that distance trees had first to be cut down before the road could be made. There were three camps built for the Corundum Mine, at which 31 huts had been built. That work had taken a considerable time and a lot of labour, and had of course interfered with the output. At the middle of September 100 tons of corundum had been mined and transported to railhead. Forty tons had been sold to a local buyer, seven tons had been shipped to the Imperial Government at their request for experimental purposes, the company being promised big business if test found satisfactory. Twelve tons had been shipped on consignment to America and 22 tons to London on consignment. It was hoped that these consignments would ultimately lead to good business. A considerable quantity of corundum conglomerate amounting to about 1,000 tons was at grass which could be transported to railhead as soon as the result of the small consignments of this class sent to London had been received. Most of the corundum shipped had been alluvial machine

washed crystal. However,

there was a ready sale.

The company had a new plant in this class of work for intended to use the plant for washing for precious corundum. As Mr. W. A. Doherty, the Chairman, reported for the 9th January 1917, and who was elected to the M. B. Board to come out to this country, Sir George Farrar, had been elected and sent up to the mines last night. Mr. Cass, who had been in the corundum in Australia, and had visited the mines in Brits, Barmah, and elsewhere, reported as follows: "I am quite satisfied that precious corundum exists here. This corundum is very typical of the Australian corundum bearing belts. The only difference is, as I said last night, to have the corundum in the form of a formation which has never been found in Australia. The reason I am sure precious corundum exists (samples) is that each specimen which is now being washed has its own peculiar colour; this I have taken particular notice of, and I am quite certain there must be crystallisation in some of these, and I have seen some transparent enough to see through them, and of a beautiful blue and pink colour, and I feel quite sure that a little practical prospecting will reward our efforts." In conclusion, the chairman considered the company had a good proposition, and thanks were due to Mr. Davidson, the manager, for the great amount of work done during the short time the company had been established and the small cost at which the work had been done.

## New Patents.

393. British United Shoe Machinery (South Africa), Ltd.—Improvements in or relating to sewing machines.
394. Abraham Izak Jacob Coetzee.—An improved flexible harrow.
395. Roger Gittins.—Improvements in root harvesting machines.
396. William Edward Brock.—Improved material for covering roofs and other purposes and process and apparatus for the production of same.
397. Lever Brothers, Ltd.—An improved process for the production of light voluminous metallic oxides, specially suitable for catalytic reactions.
398. Lever Brothers, Ltd.—Improvements in or relating to a process for the conversion of unsaturated fatty acids, their glycerides and other esters into the corresponding saturated compounds.
399. Richard Wild.—Improved spindle for door-knobs, handles and the like.
400. Dirk Lodewijk Kohlman.—Collapsible baby- and wheeling-chairs and carriages.
401. Alexander Hendry and Malcolm Allan Hendry.—Improvements in and relating to machinery driving belts.
402. The Crittall Steel Furniture Co., Ltd.—Improvements in and connected with bins or shelves.
403. Peregrine Elliott.—Improved means for preventing corrosion of metal structures or densers, boilers, pumps and the like.
404. Peregrine Elliott.—An improved method of preventing the corrosion and decomposition of metals immersed in or in contact with water or other liquids due to electro-chemical action.
405. Birger Isidor Rydberg.—Improvements in or relating to ball bearings or roller bearings.
406. Oscar Birger Carlson and Emil Filip Ottel.—Explosives.
407. John Alexander Steven.—Control gear for alternating current electric motors.
408. British United Shoe Machinery (South Africa), Ltd.—Process of and apparatus for finishing the edges of pieces of leather.
409. British United Shoe Machinery (South Africa), Ltd.—Improvements in or relating to hand-method lasting machines and other loose fastener-inserting machines for use in the manufacture of boots and shoes.
410. British United Shoe Machinery (South Africa), Ltd.—Improvements in or relating to metallic fastener-inserting machines for use in the manufacture of boots and shoes.
411. British United Shoe Machinery (South Africa), Ltd.—Improvements in or relating to skiving machines for leather and the like.
412. British United Shoe Machinery (South Africa), Ltd.—Improvements in or relating to machines for use in applying lining material to the bottom of a boot or shoe inside the same.
413. James Honiball.—An appliance for fixing to the bottom of any receptacle to be used for gathering acorns, nuts of all classes and any other round fruit, and also in picking fruit from trees.
414. Philippus Rudolf Roux.—A new process for bating hides that have been depilated with lime.

415. Ludwig Owen Menck, William James Ballantyne and John Sheehan.—An improved apparatus for delivering aerated waters and other effervescing beverages.
416. Emile Joseph Guay and James Henry Carver.—Improvements in blanks for gears, rolls and the like.
417. George Edwards.—An improved form of shovel.
418. Mose Wilbuschewitch.—Process and apparatus for converting fatty oils, oils, fish oils and wastes into like bodies of higher melting point.
419. The Lamson Paragon Supply Co., Ltd.—An improved file or folder for holding documents.
420. Arthur Henry Lynn, Lewis Adams Riley and Nield Edward Rambush.—Improvements in and relating to regenerators or heat interchangers in or for use with gas producer plants.
421. Richard Wild.—Improved handle for spades, shovels, forks and the like.
422. Antonio Vells.—A hair restorer.
423. The Cable Accessories Co., Ltd., and Frederick Harold Reeves.—Improvements in or relating to electric lamp holders.
424. Edward Kenward.—Improvements in and relating to brewing.
425. Pave Richard Kuehnrich.—An improved steel.
426. Frank Richard Rand.—Improved apparatus for use in making carpenters' joints.
427. Charles Ho-king.—A rope grip for mechanical haulage.

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